



# **CORNELL-DUBILIER ELECTRONICS SITE**

## **REVISED REMOVAL ACTION REPORT**

Submitted to

U.S. Environmental Protection Agency  
Region II - Removal Action Branch  
Edison, New Jersey 08837

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By

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## EXECUTIVE SUMMARY

The Cornell-Dubilier Electronics Site (CDE) is the location of a former manufacturer of electronic parts and components, including capacitors. Cornell-Dubilier Electronics, Inc., also tested transformer oils. During its operations, the company allegedly dumped PCB-contaminated materials and other hazardous substances directly onto the soil at the Site. The Site is approximately 25 acres in size, including an open field and adjoining wetland complex. The Bound Brook traverses the southeast corner of the Site.

The United States Environmental Protection Agency carried out the installation of geotextile fabric and rip-rap in selected areas of the Cornell-Dubilier Electronics Site in order to armor the banks of the Bound Brook. The objective of the Removal Action was to stabilize the banks along the perimeter of the CDE facility in order to eliminate the threat of direct contact with PCBs contaminated debris, and to prevent the migration of debris from the banks along the perimeter of the former CDE facility property.

During the course of the removal action, a total of 22,000 square feet of geotextile material and 23,000 square feet of Rip-rap were installed. Following the completion of construction activities, access areas were returned to their original grade and grass seed was spread over exposed soils and covered with chipped wood and/or straw matting. In addition, a new chain link fence was installed along the western bank of the Bound Brook to restrict access to the Site.

This Removal Action Report provides information regarding activities conducted between October 14 and November 18, 2008.

## **1.0 INTRODUCTION**

### **1.1 General**

The United States Environmental Protection Agency carried out the installation of geotextile fabric and rip-rap in selected areas of the Cornell-Dubilier Electronics (CDE) Site to armor the banks of the Bound Brook. The objective of the Removal Action was to stabilize the banks along the perimeter of the CDE facility to eliminate the threat of direct contact with PCBs contaminated debris, and to prevent the migration of debris from the banks along the perimeter of the former CDE facility property. Work was carried out in Reach No. 1 in the area of the three culverts and along the wetlands that border the area where PCBs contaminated debris was disposed of during the operational period of CDE. This work was conducted from October 14 to November 18, 2008.

### **1.2 Site Description**

The Site is located at 333 Hamilton Blvd, South Plainfield, New Jersey. The Site is the location of a former manufacturer of electronic parts and components, including capacitors. The company also tested transformer oils. During its operations, the company allegedly dumped PCB-contaminated materials and other hazardous substances directly onto the soil at the Site. The Site is on the National Priorities List and is being remediated by EPA and the U.S. Army Corps of Engineers. The Site is approximately 25 acres in size, including an open field and adjoining wetlands complex. The Bound Brook traverses the southeast corner of the Site.

### **1.3 Site History**

Beginning in 1936, CDE manufactured electronic components including capacitors at the Site. Polychlorinated biphenyls (PCBs) and chlorinated organic solvents were used in the manufacturing process, and the company apparently disposed of PCBs-contaminated materials and other hazardous substances directly on the facility soils. CDE's activities evidently led to widespread chemical contamination at the facility, resulting in the migration of contaminants to areas nearby to the facility. PCBs have been detected in the groundwater, soils and building interiors as well as adjacent residential, commercial, and municipal properties. PCBs have also been found in the sediments of the Bound Brook.

PCB-containing capacitors were dumped in large numbers at the Site, and capacitor debris has been found in the Bound Brook since the Site was first identified. Recent erosion of a portion of the stream bank near the Site (See Attachment A, Figure 1) may have led to a spike in the amount of capacitor debris in the Bound Brook.

### **1.4 EPA and Contractor Project Management**

The U.S. EPA Region II On-Scene Coordinator (OSC), James Kearns, based in Edison, New Jersey, was in charge of all activities at the Cornell-Dubilier Electronics Site. The Site Project Manager (SPM), Matt Foster was the technical support representative from Weston Solutions, Inc., and was assigned to the Site as a member of Region II Removal Support Team 2 (RST 2). The Emergency Rapid Response Services (ERRS) Contractor Response Manager (RM), Joseph Galioto, provided technical assistance directly to EPA and was responsible for conducting all Site activities under the ERRS Contract.

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Matt Foster, RST 2 Project Manager	Weston Solutions, Inc.	1090 King Georges Post Road Suite 201 Edison, NJ 08837 (732) 585-4400 Matthew.Foster@westonsolutions.com

## 2.0 CONSTRUCTION ACTIVITIES

### 2.1 Pre-Construction Activities / Support Zone Construction

Prior to the commencement of remedial activities in October 2008, ERRS and RST 2 personnel set up temporary office facilities, delineated work areas, and implemented site access and security measures. Support facilities included two office trailers equipped with electricity, telephone, fax, and document reproduction capabilities, and portable sanitary facilities. The OSC contacted local officials regarding community relations relevant to the remedial activities.

### 2.2 Description of Overall Site Construction Activities

The removal action included the excavation and disposal of lead and PCB contaminated soils. Clearing and construction operations were based on the erosion control plan developed by RST 2 in July 2008. Initial activities focused on the area adjacent to the wetlands located on the western bank of the Bound Brook. Following the completion of this area, the culvert system and peninsula areas were completed. Following the installation of geotextile and rip-rap, waste tree parts and brush removed during the clearing phase were chipped and spread on the work areas, and a chain link fence was installed to restrict access to contaminated areas of the Site.

### 2.3 Clearing Operations

Areas where geotextile and rip-rap installation took place were cleared using a Tracked Excavator. Additional hand-clearing was carried by ERRS technicians using a chain saw, pruners and pruning saws.

#### **2.4 Installation of Geotextile Material**

Following clearing, US380NW geotextile material was immediately installed to reduce the risk of erosion from potential run-off and/or increased stream flow following rain. A total of 22,000 square feet of geotextile material was installed.

#### **2.5 Installation of Rip-Rap**

Six inch, D50 Rip-rap was installed over the geotextile material. A one yard strip of rip-rap was installed directly on the Site soils bordering the geotextile material on the western bank of the Bound Brook. Additional rip-rap was installed along the water edge in areas of high stream flow, for example at the inlet and outlet of the twin culvert. In total, 1,300 tons of rip-rap, covering an area of 23,000 square feet, was installed.

#### **2.6 Site Restoration**

Following the completion of construction activities, access areas were returned to their original grade and Scotts® Contractor's Mix grass seed was manually spread over exposed soils and covered with chipped wood and/or straw matting. In addition, 500 feet of new chain link fence was installed along the western bank of the Bound Brook to restrict access to the Site.

### **3.0 PERIMETER AIR MONITORING AND DUST CONTROL**

#### **3.1 Perimeter Air Monitoring**

Starting on October 14, 2008, RST 2 conducted real-time air monitoring for total particulate matter (total dust) during initial Site activities using three, Thermo DataRAM-4000 monitors. Two DataRAMs were mounted on monitoring stations located downwind of the main work area of the Site for that monitoring period. The third DataRAM was located upwind of the work area to collect control/background data. DataRAMs were typically operated for a period of 6 to 7 hours a day, and were biased towards the areas of operations where maximum dust emissions were expected, such clearing using an excavator, were being carried out. At the end of each day, the time-weighted average (TWA) and the maximum value (averaged every 10 seconds) for the day were recorded and documented for each DataRAM. This data was downloaded and a daily report was generated. A graph was created based on the data collected for each day. Air monitoring data was used to evaluate whether on-site dust suppression measures were warranted and sufficient. The action level for evaluation of effective dust suppression was a TWA of  $0.15 \text{ mg/m}^3$ , based on the National Air Quality Standard (NAAQS) for particulates. The action level requiring an upgrade of PPE to Level C was a TWA  $2.5 \text{ mg/m}^3$ , based on the OSHA Permissible Exposure Limit (PEL) for PCBs ( $0.5 \text{ mg/m}^3$ ) and a maximum PCBs soil concentration of  $180 \text{ mg/kg}$  in the soils/sediments following RST 2's sampling event in December 2007/January 2008. Following the initial period of Site operations, the OSC determined that dust control measures were adequate and routine particulate monitoring was suspended on October 20, 2008. On October 22, 2008, additional particulate monitoring was carried out due to high wind speeds encountered at the Site.

#### **3.2 Dust Control**

A dust control program was implemented to eliminate the potential for the off-site migration of contaminants to the surrounding community during all clearing and construction activities at the Site. The dust control program included the operation of Site equipment and vehicles in a manner so as to minimize the emission of dust by controlling maximum operating speeds and controlling the manner in which materials such as stone and soil were unloaded.

## 4.0 OBSERVATION AND LESSON LEARNED

### 4.1 Unusual Events

During the installation of Rip-rap, difficulty in transferring stockpiled stone to the work area was encountered. Limited access in the area of the twin culvert and peninsula areas contributed to the difficulty of transferring stone. A 12 cubic foot rock box was utilized to better facilitate the transfer operation (see Attachment 2, photographs 46 and 57).

## 5.0 REMOVAL ACTION ACTIVITIES

<u>Day, Date</u>	<u>Activity</u>
Monday October 13, 2008	RM Galioto mobilized to the Site with ERRS Operator Williams. Trailer, portable bathrooms, geotextile material and excavator are delivered to the Site. ERRS personnel inspected and setup equipment. RM Galioto met with electrician to discuss requirements. Weather record was 81 °F with humidity 83% and wind light and variable.
Tuesday October 14, 2008	The EPA OSC, ERRS foreman and technician, and RST 2 mobilized to the Site. OSC, ERRS and RST 2 collected equipment from the EPA office in Edison. Wheeled Loader and photocopier were delivered to the Site. ERRS started grubbing in the southwestern corner of Site adjacent to the Spicer Avenue perimeter fence. Approximately 5,000 sq ft was cleared. RST 2 conducted particulate monitoring using DataRAM 4000 particulate matter monitors - no particulate exceedances were recorded. Weather record was 75 °F with humidity 83% and wind speed at 3 mph from the SW.
Wednesday October 15, 2008	ERRS installed the Stone Staging Area. ERRS continued grubbing in the southwestern corner of the Site adjacent to the Spicer Avenue perimeter fence. Approximately 7,200 sq ft has been cleared to date. ERRS installed geotextile material in the southwestern corner of the Site. Approximately 750 sq ft of geotextile material was installed. Verizon connected telephone service to the Site trailers. OSC obtained replacement DataRAM from the EPA office in Edison. RST 2 conducted particulate monitoring using DataRAM 4000 particulate monitors - no particulate exceedances were recorded. RST 2 measured total area cleared by ERRS. RST 2 photographed Site activities and generated photo documentation log. RST 2 generated daily site entry/exit log. RST 2 generated particulate monitoring summary. Weather record was 73 °F with humidity 77% and wind speed at 1 mph from the NNW.
Thursday October 16, 2008	Six truck-loads of six inch, D50 rip-rap were delivered to the Site and staged. ERRS transferred the staged stone to a prepared area in southwest corner of the Site. ERRS installed stone over the geotextile in southwest corner of the Site. Approximately 3,000 sq ft. of geotextile and rip-rap has been installed. An electrician connected power to the Site trailers. RST 2 conducted particulate monitoring using DataRAM 4000 particulate monitors - no particulate exceedances were recorded. However, particulate levels were elevated due to haze and high humidity. RST 2 photographed Site activities and generated photo documentation log. RST 2 generated daily site entry/exit log. RST 2 generated particulate monitoring summary. Weather record was 79 °F with humidity 69% and wind speed at 7 mph from the NNW.

<u>Day, Date</u>	<u>Activity</u>
Friday October 17, 2008	Diesel fuel tank delivered to the Site. Rock box delivered to the Site. Eight truck-loads of six inch, D50 rip-rap delivered to the Site. ERRS continued installing geotextile material and rip-rap in the wetlands area. Approximately 3,480 ft <sup>2</sup> of geotextile and rip-rap was installed. A total of 6,480 ft <sup>2</sup> of geotextile material and rip-rap has been installed to date. RST 2 conducted particulate monitoring with DataRAM 4000 particulate monitors. No particulate exceedances were recorded. RST 2 photographed Site operations and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 60 °F with humidity 64% and wind speed at 1 mph from the S to N.
Monday October 20, 2008	ERRS continued clearing along the stream bank area to the south of the twin culvert. Approximately 150 linear feet of the stream bank was cleared. Geotextile material and rip-rap were installed on approximately 50 linear feet of the stream bank. Six truck-loads of six inch, D50 rip-rap were delivered. Approximately 512 tons of rip-rap has been delivered to date. RST 2 conducted particulate monitoring with DataRAM 4000 particulate monitors. No particulate exceedances were recorded. RST 2 photographed Site operations and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 63 °F with humidity 66% and wind speed at 3 mph from the NW.
Tuesday October 21, 2008	ERRS continued clearing the stream bank adjacent to the southern side of the twin culvert. Approximately 180 feet of geotextile and rip-rap have been installed to date. Approximately 10,000 ft <sup>2</sup> of geotextile and rip-rap have been installed to date. Three truck loads of rip-rap were delivered for a total of 590 tons of rip-rap delivered to date. Total quantity of rip-rap delivered today was reduced due to insufficient supply at quarry. RST 2 photographed Site activities and prepared photo-documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 63 °F with humidity 64% and wind light and variable.
Wednesday October 22, 2008	ERRS cleared vegetation from the overburden of the upstream culvert system. ERRS cleared debris including tree limbs and litter from the downstream culvert. Seven truck loads of stone were delivered to the Site. A total of approximately 760 tons of rip-rap has been delivered to date. RST 2 conducted particulate monitoring in response to changed weather conditions, i.e. increased wind speed. No particulate exceedances were recorded. RST 2 photographed Site activities and updated Site photo log. RST 2 generated and maintained the Site Entry/Exit Log and Site Activities Log. Weather record was 53 °F with humidity 59% and wind speed at 10 mph from the NNW.
Thursday October 23, 2008	ERRS completed the clearing of vegetation from the overburden of the upstream culvert system and installed geotextile and rip-rap on the southern culvert bank and approximately 50 linear feet of the stream bank adjacent to the culvert. Approximately 1,680 ft <sup>2</sup> of rip-rap was installed today, for a total of 12,480 ft <sup>2</sup> of rip-rap installed. Three truck loads of rip-rap were delivered for a total of 837 tons of rip-rap delivered to date. Tree branches removed from the downstream culvert were sized and relocated away from the stream. RST 2 photographed Site activities and updated Site photo log. RST 2 generated and maintained the Site Entry/Exit Log and Site Activities Log. Weather record was 57 °F with humidity 69% and wind speed at 2 mph from the N.

<u>Day, Date</u>	<u>Activity</u>
Friday October 24, 2008	ERRS installed rip-rap on the northern bank of the upstream culvert system. Approximately 1,600 ft <sup>2</sup> of rip-rap was installed. ERRS dressed rip-rap along the entire length of the western bank to reflect the planned fence line. Two truck loads of rip-rap were delivered for a total of 888 tons of rip-rap delivered to date. Approximately 14,080 ft <sup>2</sup> of rip-rap has been installed. RST 2 photographed Site activities and updated Site photo log. RST 2 generated and maintained the Site Entry/Exit Log and Site Activities Log. Weather record was 55 °F with humidity 76% and wind speed at 0 mph from the S.
Monday October 27, 2008	ERRS removed remnants of the existing chain link fence along the western stream bank. ERRS installed rip-rap at the waterline on the southern side of the twin culvert along the eastern bank. ERRS partially removed debris at the inlet to the twin culvert. The water level dropped approximately one foot from the previous level. ERRS cleared vegetation from the stream bank adjacent to the downstream side of the twin culvert. RST 2 photographed Site operations and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 60 °F with humidity 75% and wind speed at 0 mph from the NNW.
Tuesday October 28, 2008	At the direction of the OSC, ERRS activities were curtailed due to rain and forecast high wind speeds. A twelve-inch wood chipper was delivered to the Site. RST 2 photographed Site conditions i.e. increased stream flow, and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 43 °F with humidity 84% and wind speed at 9 mph from the NW.
Wednesday October 29, 2008	ERRS partially cleared the peninsula on the north side of the upstream culvert system and cleared the western stream bank downstream of the twin culvert. ERRS installed geotextile material on the western bank downstream of the twin culvert. Approximately 1,000 ft <sup>2</sup> of rip-rap was installed, for a total of approximately 15,080 ft <sup>2</sup> of rip-rap installed to date. RST 2 photographed Site activities and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 46 °F with humidity 67% and wind speed at 7 mph from the WNW.
Thursday October 30, 2008	ERRS installed geotextile material on the western bank downstream of the twin culvert. Approximately 2,000 ft <sup>2</sup> of rip-rap was installed, for a total of approximately 17,080 ft <sup>2</sup> of rip-rap installed to date. A skid-steer loader was delivered to the Site. RST 2 photographed Site activities and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 50 °F with humidity 61% and wind speed at 2 mph from the NW.
Friday October 31, 2008	ERRS carried out wood chipping of stockpiled brush and trees. Chipped wood was spread in cleared areas adjacent to rip-rap. Four truck loads totaling 102 tons of stone were delivered. RST 2 photographed Site activities and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 64 °F with humidity 64% and wind light and variable.

<u>Day, Date</u>	<u>Activity</u>
Monday November 3, 2008	ERRS cleared the peninsula area east of the twin culvert and installed approximately 750 ft <sup>2</sup> of geotextile fabric and rip-rap. Approximately 17,830 ft <sup>2</sup> of rip-rap has been installed to date. RST 2 photographed Site operations and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 54 °F with humidity 81% and wind speed at 2 mph from the NNW.
Tuesday November 4, 2008	ERRS continued the installation of geotextile fabric and rip-rap on the peninsula area east of the twin culvert. Approximately 3,000 ft <sup>2</sup> of geotextile and rip-rap was installed. Approximately 20,280 ft <sup>2</sup> of geotextile material and rip-rap has been installed to date. Approximately 1,220 tons of rip-rap has been delivered. RST 2 photographed Site activities and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 64 °F with humidity 85% and wind speed at 1 mph from the NNW.
Wednesday November 5, 2008	ERRS completed the installation of geotextile material and rip-rap on the peninsula area. ERRS installed rip-rap on top of the culvert system. Approximately 2,000 ft <sup>2</sup> of rip-rap was installed for a total of approximately 22,780 ft <sup>2</sup> of rip-rap installed to date. Three truck loads of rip-rap were delivered for a total of 1,300 tons of rip-rap delivered to date. RST 2 photographed Site activities and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 66 °F with humidity 84% and wind speed at 3 mph from the NNW.
Thursday November 6, 2008	ERRS continued to chip the brush and tree parts stockpiled during clearing of the work areas. RST 2 photographed Site activities and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 60 °F with humidity 86% and wind speed at 13 mph from the NNE.
Friday November 7, 2008	ERRS installed fence posts adjacent to the rip-rap along western bank of the Bound Brook. Approximately 40 fence posts were installed with concrete footings. ERRS decontaminated front end loader. Weather record was 64 °F with humidity 84% and wind speed at 2 mph from the NNW.
Monday November 10, 2008	ERRS completed the installation of the fence posts. Approximately 52 fence posts were installed. ERRS continued chipping stockpiled brush and tree waste. The front end loader was picked up by the rental company. RST 2 photographed Site operations and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 50 °F with humidity 51% and wind speed at 2 mph from the WNW.
Tuesday November 11, 2008	ERRS continued chipping stockpiled brush and tree waste. Approximately 90% of chipping has been completed to date. The rock-box was picked up by the rental company. RST 2 not on Site today. Weather record was 50 °F with humidity 66% and wind speed at 1 mph from the NW.

<u>Day, Date</u>	<u>Activity</u>
Wednesday November 12, 2008	ERRS completed the chipping of the stockpiled brush and tree waste. The chipper was picked up by the rental company. ERRS installed top rails on the fence. A roll-off dumpster was delivered to Site for disposal of PPE, polyethylene sheeting and old fence materials. RST 2 photographed Site activities and prepared photo documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 50 °F with humidity 72% and wind speed at 0 mph from the SW.
Thursday November 13, 2008	ERRS installed approximately 300 feet of fencing material. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 55 °F with humidity 94% and wind speed at 1 mph, variable.
Friday November 14, 2008	ERRS completed the installation of the chain link fence and two gates. Approximately 200 ft. of fence was installed for a total of 500 feet of fence to date. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 60 °F with humidity 99% and wind speed at 0 mph from the SSW.
Saturday November 15, 2008	ERRS installed approximately 230 feet of silt fence along the chain link fence line. A two foot wide section of rip-rap was installed along the fence line as well. The skid steer loader was decontaminated. Weather record was 71 °F with humidity 95% and wind speed at 1 mph from the SSE.
Sunday November 16, 2008	ERRS installed approximately 200 ft. of rip-rap along the fence line. Weather record was 55 °F with humidity 62% and wind speed at 6 mph from the W.
Monday November 17, 2008	ERRS installed Scotts® Contractor's Mix grass seed and covered with chipped tree waste and straw matting. ERRS decontaminated the excavator. RST 2 photographed ERRS activities and updated Site photo-documentation. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. Weather record was 46 °F with humidity 63% and wind speed at 5 mph from the W.
Tuesday November 18, 2008	Electricity was disconnected from the Site Trailers by an electrical subcontractor. ERRS returned furniture to the EPA office in Edison. RST 2 generated and maintained Site Entry/Exit Log and Site Activities Log. RST 2 photographed ERRS activities and updated Site photo-documentation. ERRS and RST 2 personnel demobilized from the Site. Weather record was 39 °F with humidity 56% and wind speed at 2 mph from the NNW.

## **6.0 PERFORMANCE STANDARDS AND QUALITY CONTROL**

### **6.1 RST 2 and ERRS Project Organization**

RST 2 and ERRS personnel supported the U.S. EPA with technical expertise in various scientific disciplines in order to meet the project challenges.

### **6.2 Site Health and Safety Program**

It is the intent of the U.S. EPA to conduct its operations in a manner that provides safe and healthful working conditions for employees, contractors, and visitors. All applicable Occupational Safety and Health Administration (OSHA), U.S. EPA/ERT, Weston Solutions and Earth Tech standards, Federal and State Laws, regulations, policies and procedures were followed during this project.

#### **6.2.1 RST 2 Project Manager**

The RST 2 Project Manager was responsible for ensuring that all RST 2 employees abided by all requirements of the RST 2 Health and Safety Program and site-specific HASP. The RST 2 Project Manager or designee was involved in the review and management of SOPs, training, HASPs, and program audits.

#### **6.2.2 RST 2 Site Health and Safety Officer**

The RST 2 Site Health and Safety Officer (HSO) was responsible for the day-to-day maintenance and implementation of the RST 2 Health and Safety Program. This included compliance with applicable U.S.EPA, OSHA, and Weston Solutions, policies, and procedures.

#### **6.2.3 ERRS Response Manager (RM)**

The ERRS Response Manager was directly responsible for ensuring the preparation and daily implementations of the Cornell-Dubilier Site HASP for all ERRS personnel. The RM initiates and maintains communication with the ERRS HSO concerning site-specific health and safety issues and project status. In case of emergency, the RM took immediate action to correct any deficiencies in safety operations reported to him by Site personnel.

#### **6.2.4 ERRS Site Health and Safety Coordinators**

The ERRS Site Health and Safety Coordinators (SHSCs) were responsible for ensuring that all requirements of the HASP were adhered to by RST 2 and ERRS personnel and subcontractors.

#### **6.2.5 ERRS/RST 2 Staff**

Every ERRS and RST 2 employee was responsible for adhering to all provisions of the Health and Safety Program and individual HASPs. In addition, employees were expected to exercise appropriate caution with the respect to their individual safety and be concerned with the safety of fellow team members. All RST 2 and ERRS employees had the responsibility of identifying and being aware of workplace hazards, evaluating the hazards, and implementing appropriate measures to protect themselves against those hazards.

#### 6.2.6 Health and Safety Plans

ERRS generated and submitted a site-specific Health & Safety Plan (HASP) in October, 2008 that provided the majority of the safety guidelines for on-site work. This HASP was signed by EPA and RST 2.

#### 6.2.7 Personal Protective Equipment (PPE)

Multiple levels of Personal Protective Equipment (PPE) were outlined in the site-specific HASP, with action levels specified according to particulate matter levels measured during air monitoring. At no time during the air monitoring phase was the Site Specific action level for particulate matter exceeded, and Level D PPE was utilized for the entire Removal Action.

Rational for Selection:

- Potential for exposure to chemical substances, and the type of substances.
- Type and measured concentration of chemical substances in the ambient atmosphere and its toxicity.

As a rule of thumb, if personnel had the opportunity to come in contact with contaminated soil, then the minimum level of PPE was Modified Level D. If air monitoring indicated levels of particulate matter above thresholds established in the EPA-approved HASP, then PPE was to be upgraded to Level C. The minimum PPE outlined in the HASP were as follows:

<u>TYPE</u>	<u>MATERIAL</u>	<u>ADDITIONAL INFORMATION</u>
<b><u>Minimum PPE:</u></b>		
Safety Vest	High-visibility	Must have reflective tape and be visible from all sides
Boots	Leather, steel toed	ANSI Z41 approved safety toe
Safety Glasses w/ sideshields		ANSI Z87.1 Approved
Hard Hat		ANSI Approved
Work Uniform		No shorts/cutoff jeans or sleeveless shirts
<b><u>Additional PPE:</u></b>		
Hearing Protection	Ear plugs and/ or muffs (minimum 29 NRR)	In hazardous noise areas
Work Gloves	Leather	If working with sharp objects or powered equipment.
Protective Chemical Gloves	Inner: Nitrile	
Protective Chemical Coveralls	Inner: Tyvek® or equivalent Outer: Tychem SL® or equivalent	

<b>Protective Chemical Boots</b>	Rubber, neoprene, PVC	
<b>Level C Respiratory Protection</b>	MSA (Full Face or equivalent) equipped with GMA/P100	Cartridge change out schedule: At the end of each work shift.
<b>Level B Respiratory Protection</b>	Self Contained Breathing Apparatus (SCBA) or Airline with 5 minute escape pack.	Grade "D" Certified Air (Certificate Required).
<b>Face Protection</b>	Debris/splash shield	
<b>Body Protection</b>	Apron, Chaps	During chainsaw operations
<b>Welding PPE</b>	Leathers, appropriate lens	See SH&E 411 for specific PPE
<b>Fall Protection</b>	Full body harness, lanyard	

Generally speaking, the levels of PPE worn during remedial activities were as follows:

#### Level C

- Full face APR with combination organic vapor / P100 cartridge
- Disposable Tyvek® or Saranex® Suit
- Inner / outer chemical resistant Nitrile® gloves
- Disposable boot covers
- Steel toe / shank boots
- Hard hat

#### Level D

- Steel toe / shank boots
- Disposable boot covers
- Hard hat
- Work gloves or chemical resistant Nitrile® gloves
- Eye protection
- Coveralls

### **6.2.8 Project / Health & Safety Training Requirements**

On-site personnel must have completed an approved 40-hour OSHA HAZWOPER Training course and must be current with approved 8-hour OSHA HAZWOPER Refresher Training courses. On-site personnel required to be enrolled in a company-provided medical monitoring program and be approved to wear respiratory protection. Project specific training included but was not limited to training on the use of equipment, excavation safety and operating around heavy equipment.

### **6.2.9 Site Health and Safety Quality Control**

The RST 2 and ERRS SHSCs were responsible for ensuring that all requirements of the HASP were adhered to by on-site personnel and subcontractors.

#### **6.2.10 Air Monitoring**

The most commonly used direct monitoring instrument employed by RST 2 personnel for breathing zone air monitoring was the Thermo DR-4000 particulate monitor. This instrument was used to measure the concentration of Total Suspended Particulates.

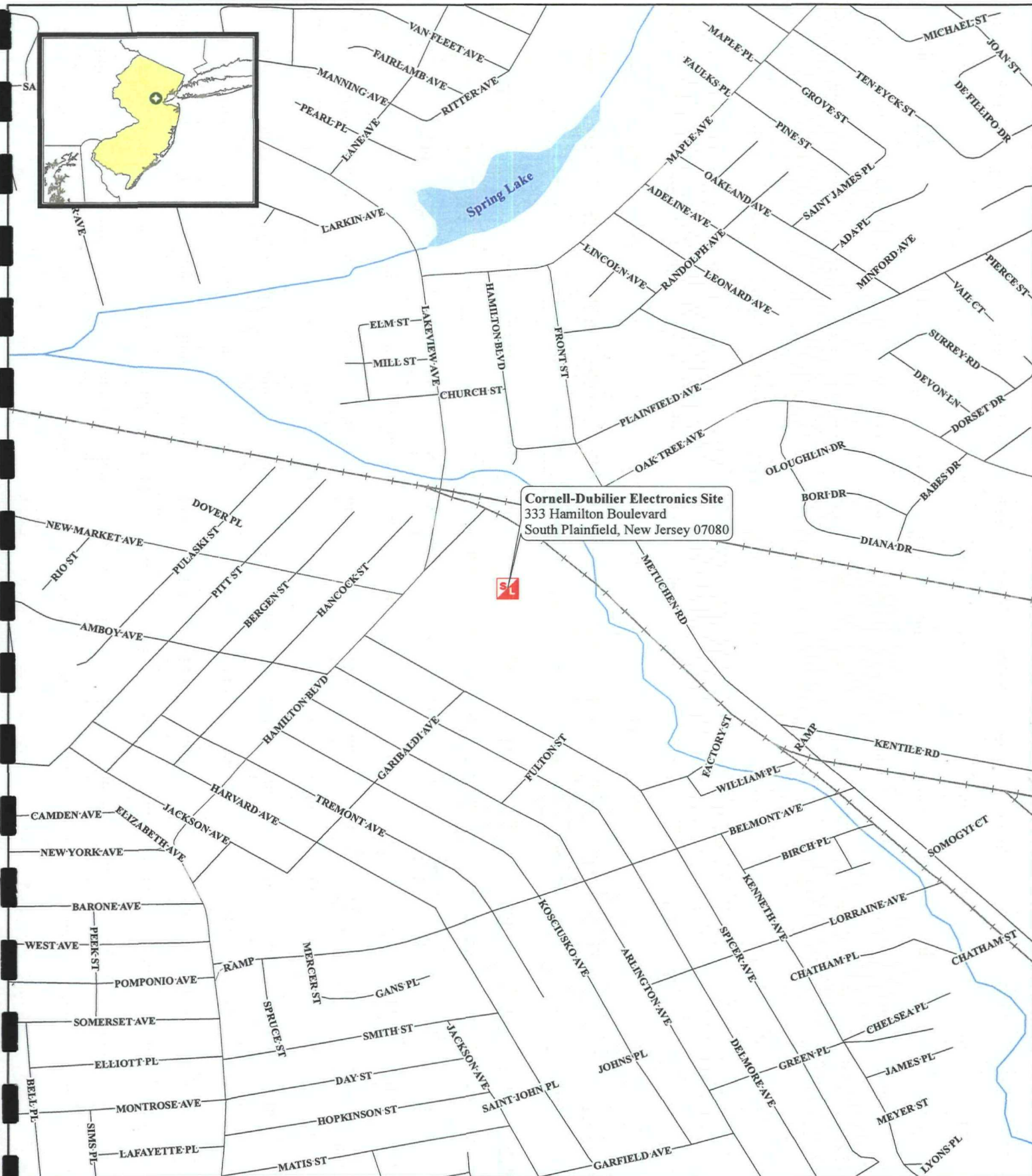
#### **6.2.11 Personal Decontamination Procedures**

The following steps describe the decontamination sequence for each level of protection employed on-site.

<u>Level D</u>	<u>Level C</u>
Step 1: Remove Boot Covers	Remove Boot Covers
Step 2: Remove Outer / Work Gloves	Remove Tyvek / Saranex
Step 3: Remove Coveralls	Remove Outer Gloves
Step 3: Remove Inner Gloves (if any)	Remove Respirator
Step 4: Wash Hands and Face	Remove Inner Gloves
Step 5: N/A	Wash Hands and Face
Step 6: N/A	Decontaminate Respirator

**ATTACHMENT 1**

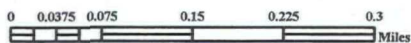
**SITE FIGURES**



# Legend



Site Location



**Weston Solutions, Inc.**  
Northeast Division

In Association With  
Innovative Technical Solutions, Inc.,  
Scientific and Environmental Associates, Inc.  
and Avatar Environmental, LLC.

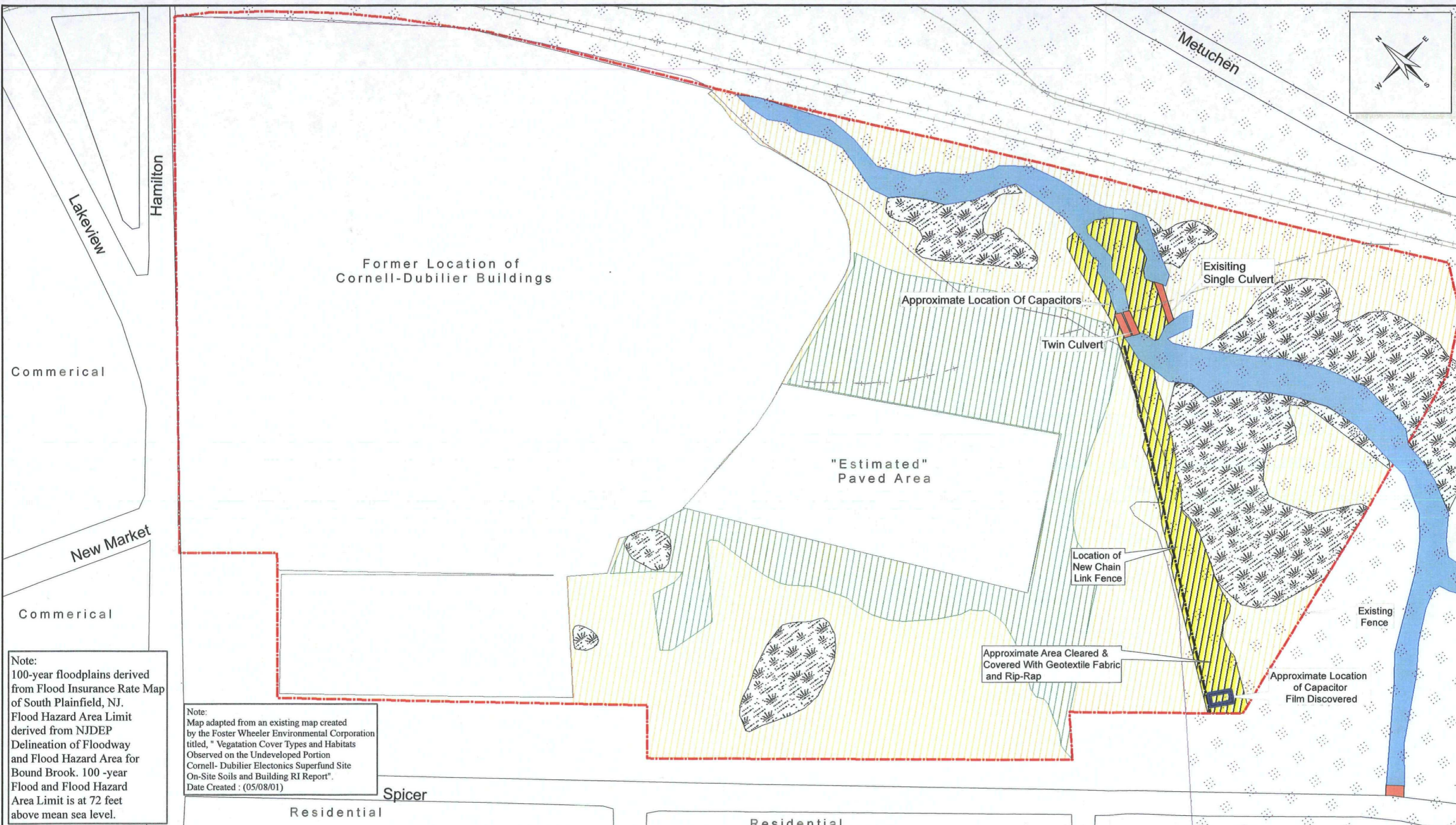
**Figure 1:  
Site Location Map**

CORNELL - DUBILIER ELECTRONICS SITE  
SOUTH PLAINFIELD, NEW JERSEY

U.S. ENVIRONMENTAL PROTECTION AGENCY  
REMOVAL SUPPORT TEAM 2  
CONTRACT # EP-W-06-072

DATE MODIFIED: 11/24/2008

GIS ANALYST:	F. CAMPBELL
EPA OSC:	D. HARKAY
RST SPM:	M. FOSTER
FILENAME:	SITEMAP.MXD

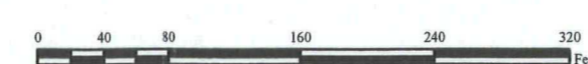


Note:  
100-year floodplains derived from Flood Insurance Rate Map of South Plainfield, NJ. Flood Hazard Area Limit derived from NJDEP Delineation of Floodway and Flood Hazard Area for Bound Brook. 100 -year Flood and Flood Hazard Area Limit is at 72 feet above mean sea level.

Note:  
Map adapted from an existing map created by the Foster Wheeler Environmental Corporation titled, "Vegetation Cover Types and Habitats Observed on the Undeveloped Portion Cornell- Dubilier Electronics Superfund Site On-Site Soils and Building RI Report". Date Created : (05/08/01)

- Legend**
- |  |                                   |                         |                    |
|--|-----------------------------------|-------------------------|--------------------|
| 100 Year Floodplain                              | Facility Property Boundary Limits | Geotextile Area         | Successional Field |
| Bound Brook                                      | Paved Area                        | Wetland Boundary Limits | Rail Road          |
| Approximate Location of Film Capacitor Discovery | Broad Leaved Deciduous Forest     | Culvert                 | Fence              |

**Stream Bank/ Wetlands Erosion Control Plan  
Cornell- Dubilier Electronics Superfund Site**



**WESTON SOLUTIONS** **Weston Solutions, Inc.**  
Northeast Division  
In Association With  
Avatar Environmental, LLC,  
Innovative Technical Solutions, Inc.  
and Scientific and Environmental Associates, Inc.

Figure 2  
Interim Removal Action  
Construction Summary

CORNELL-DUBILIER SITE PLAINFIELD, NEW JERSEY	
U.S. ENVIRONMENTAL PROTECTION AGENCY REMOVAL SUPPORT TEAM CONTRACT # EP-W-06-072	
DRAWN BY:	J. JAGER
EPA OSC:	J. KEARNS
RST SPM:	M. FOSTER
FILENAME:	CORNELL-DUBILIER.MXD

DATE MODIFIED: 11/17/2008

**ATTACHMENT 2**  
**PHOTO DOCUMENTATION**

**Cornell Dubilier Electronics Site, Removal Action – Oct 14 – Nov 18, 2008**



Picture 1: Southeastern corner of the Site prior to grubbing (October 14, 2008).



Picture 2: Southeastern corner of the Site during grubbing (October 14, 2008).



Picture 3: Area adjacent to the fence bordering the wetlands prior to grubbing (October 14, 2008).



Picture 4: Area adjacent to the fence bordering the wetlands following grubbing (October 14, 2008).



Picture 5: Slope bordering the wetlands at the southeastern corner of the Site prior to grubbing (October 14, 2008).



Picture 6: Slope bordering the wetlands at the southeastern corner of the Site following grubbing (October 15, 2008).



Picture 7: Two corroded drums retrieved from the western side of Spicer Avenue perimeter fence (October 15, 2008).



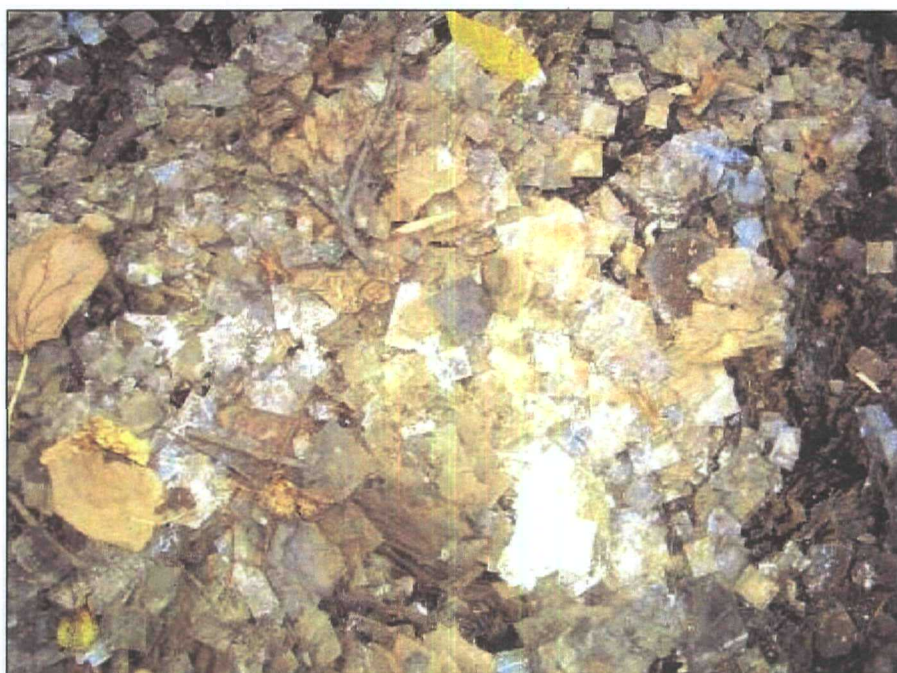
Picture 8: Poly sheeting placed over crushed stone base in the Stone Staging Area (October 15, 2008).



Picture 9: Additional crushed stone placed over poly sheeting in the Stone Staging Area (October 15, 2008).



Picture 10: Capacitor film uncovered near the southwest corner of the Site (October 15, 2008).



Picture 11: Detail of capacitor film uncovered near the southwest corner of the Site (October 15, 2008).



Picture 12: Geotextile material installed on the stream bank adjacent to the wetlands perimeter fence (October 15, 2008).



Picture 13: Rip-rap in the stone staging area (October 16, 2008).



Picture 14: ERRS transferring rip-rap with a front end loader (October 16, 2008).



Picture 15: ERRS transferring rip-rap with an excavator (October 16, 2008).



Picture 16: Rip-rap installed over geotextile material at the edge of the wetlands area (October 16, 2008).



Picture 17: Rip-rap installed over geotextile material. Arrow indicates edge of geotextile underneath the rip-rap (October 17, 2008).



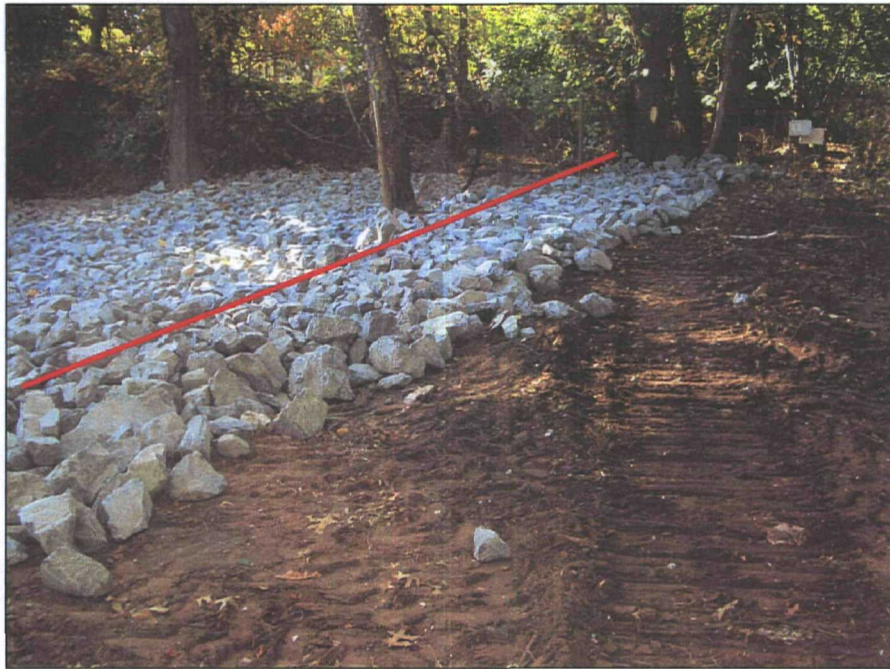
Picture 18: Rip-rap installed in the southwest corner of the Site. The loader is located near the southern perimeter of the Site (October 16, 2008).



Picture 19: Rip-rap installation in the southwestern corner of the Site is complete (October 20, 2008).



Picture 20: Four foot wide strip of rip-rap (stone only) installed on the western side of the wetlands perimeter fence (October 20, 2008).



Picture 21: Four foot wide strip of rip-rap (stone only) installed on the western side of the wetlands perimeter fence. Line indicates the fence line (October 20, 2008).



Picture 22: Stream bank at the edge of wetland area, viewed from the North prior to grubbing (October 20, 2008).



Picture 23: Stream bank at the edge of the wetlands area viewed from the South during grubbing. Box indicated final fence post in existing fence (October 20, 2008).



Picture 24: Bank at the edge of the wetlands area viewed from the North prior to grubbing (October 20, 2008).



Picture 25: Bank at the edge of the wetlands area viewed from the South after grubbing.  
(October 20, 2008).



Picture 26: Bank at the edge of the wetlands area viewed from the South with geotextile  
material installed (October 20, 2008).



Picture 27: Bank at the edge of the wetlands area viewed from the South with rip-rap installed  
(October 20, 2008).



Picture 28: Bank approximately 150 feet South of the twin culvert after grubbing  
(October 21, 2008).

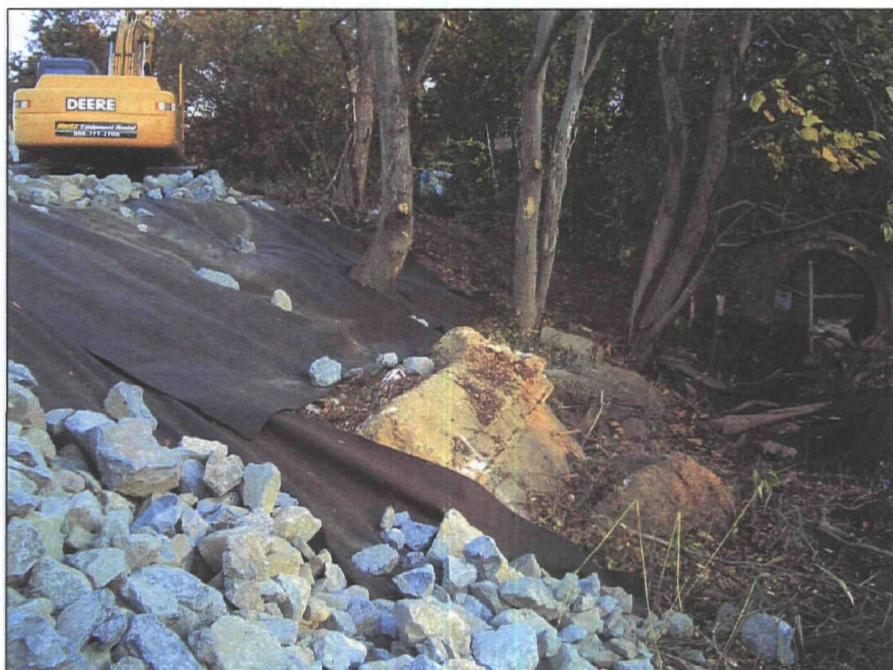


Picture 29: Bank approximately 150 feet South of the twin culvert with rip-rap installed (October 21, 2008).

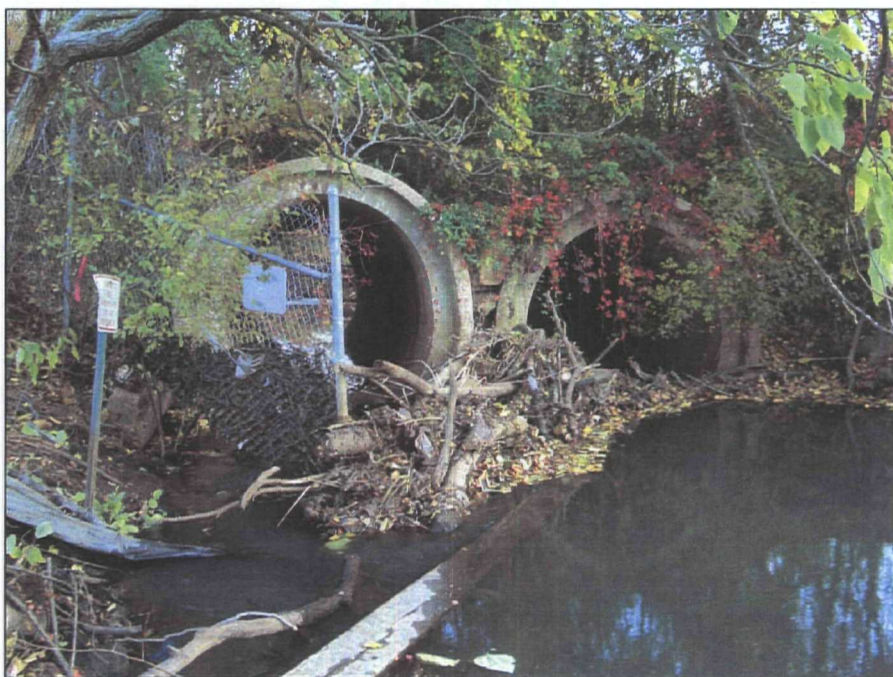


Picture 30: Area South of the twin culvert with geotextile and rip-rap installed (October 22, 2008).

**Cornell Dubilier Electronics Site, Removal Action – Oct 14 – Nov 18, 2008**



Picture 31: Stream bank adjacent to the twin culvert with geotextile installed (October 22, 2008).



Picture 32: Debris in front of the twin culvert (October 22, 2008).



Picture 33: ERRS partially clearing debris from the southern side of the twin culvert (October 22, 2008).



Picture 34: Southern side of the twin culvert with debris partially cleared (October 22, 2008).



Picture 35: Area above the twin culvert prior to clearing (October 22, 2008).



Picture 36: Southern side of the twin culvert cleared. (October 23, 2008).



Picture 37: Area above the twin culvert prior to clearing (October 22, 2008).



Picture 38: Area above the twin culvert following clearing (October 22, 2008).



Picture 39: Southern side of the twin culvert with geotextile material installed (October 23, 2008).



Picture 40: Southern side of the twin culvert with rip-rap installed (October 23, 2008).



Picture 41: Debris at the upstream side of the downstream culvert prior to clearing (October 22, 2008).



Picture 42: Upstream side of the downstream culvert following clearing (October 22, 2008).



Picture 43: Debris at the upstream side of the downstream culvert prior to clearing (October 22, 2008).



Picture 44: Upstream side of the downstream culvert following clearing (October 22, 2008).



Picture 45: Rip-rap along the western bank of the wetlands dressed to match fence line (October 27, 2008).



Picture 46: ERRS utilizing rock box to stage rip-rap for installation on the twin culvert (October 22, 2008).



Picture 47: Rip-rap installed on the base of the stream bank on the upstream side of the twin culvert (October 27, 2008).



Picture 48: ERRS removing debris from the southern side of the twin culvert, partially clearing inlet (October 27, 2008).



Picture 49: ERRS removing remnants of the damaged, existing chain link fence on the western bank adjacent to the wetlands area (October 27, 2008).



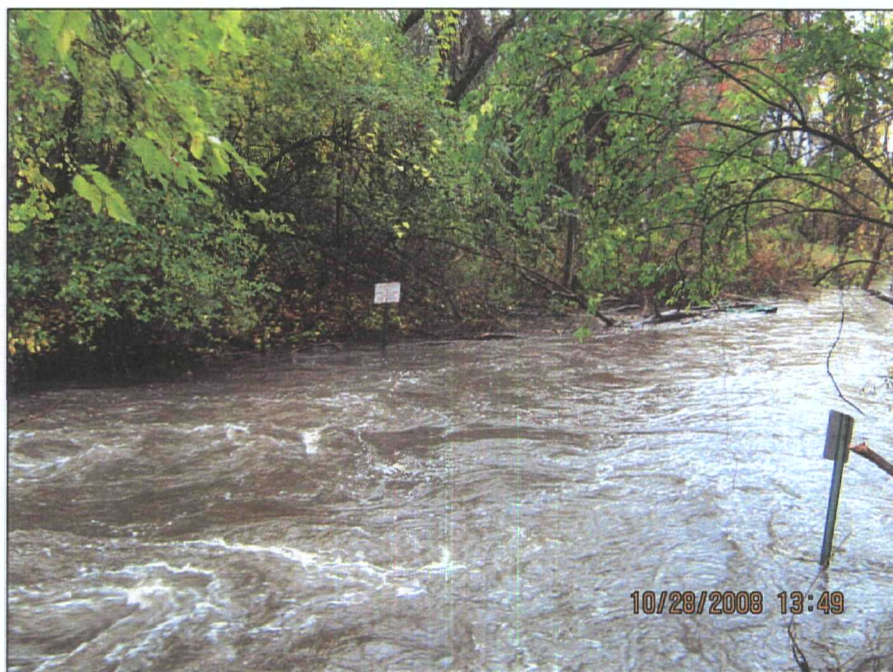
Picture 50: Rip-rap in the southwestern corner of the Site. The existing fence was removed and rip-rap edged along the fence line (October 27, 2008).



Picture 51: Increased stream height at the inlet to the twin culvert during rain (October 28, 2008).



Picture 52: Increased stream height at the outlet to the twin culvert during rain (October 28, 2008).



Picture 53: Increased stream height downstream of the twin culvert during rain (October 28, 2008).



Picture 54: Increased stream height in the wetlands area during rain (October 28, 2008).



Picture 55: West bank downstream of the twin culvert after clearing (October 29, 2008).



Picture 56: West bank, downstream of the twin culvert; geotextile material has been installed (October 29, 2008).



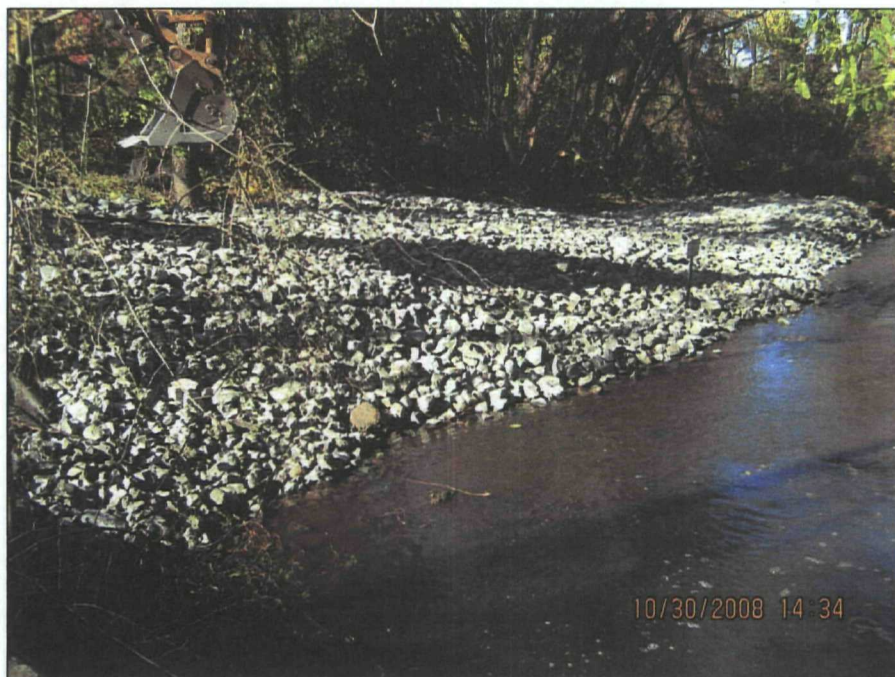
Picture 57: West bank downstream of the twin culvert. A rock box was used for staging rip-rap (October 29, 2008).



Picture 58: West bank, downstream of the twin culvert. A section of rip-rap has been installed (October 29, 2008).



Picture 59: West bank downstream of the twin culvert. Example of capacitor discovered during clearing (October 29, 2008).



Picture 60: West bank, downstream of the twin culvert. Rip-rap has been installed (October 30, 2008).

**Cornell Dubilier Electronics Site, Removal Action – Oct 14 – Nov 18, 2008**



Picture 61: West bank, downstream of the twin culvert. Rip-rap has been installed (October 31, 2008).



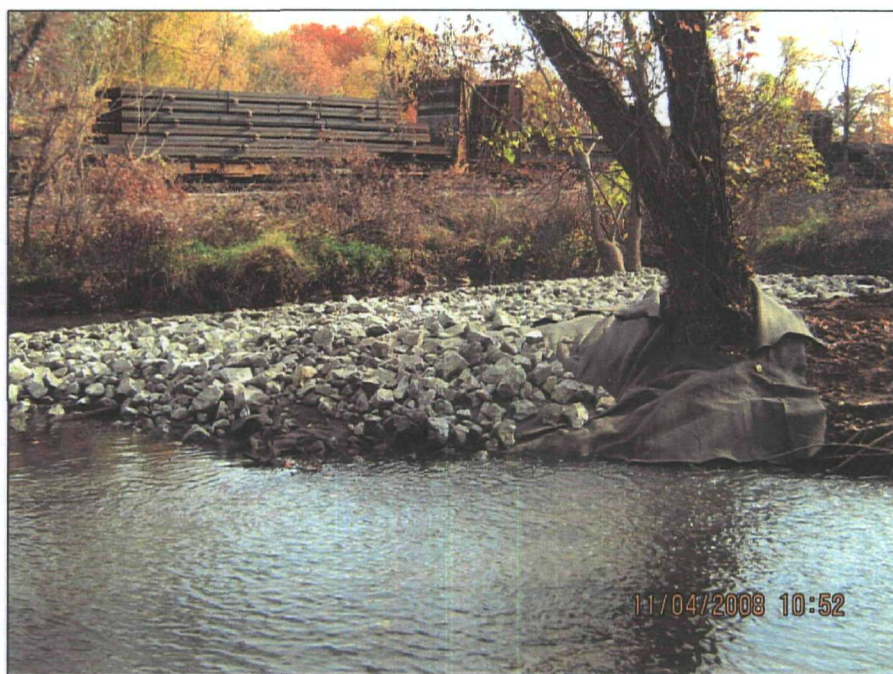
Picture 62: Wood chipping to dispose of cleared brush and trees on-Site (October 31, 2008).



Picture 63: Peninsula East of the twin culvert after clearing  
(November 3, 2008).



Picture 64: Northern end of the peninsula East of the twin culvert after clearing  
(November 3, 2008).



Picture 65: Northern end of the peninsula East of the twin culvert. Geotextile and rip-rap has been installed (November 4, 2008).



Picture 66: Northern end of the peninsula East of the twin culvert. Geotextile and rip-rap has been installed (November 4, 2008).

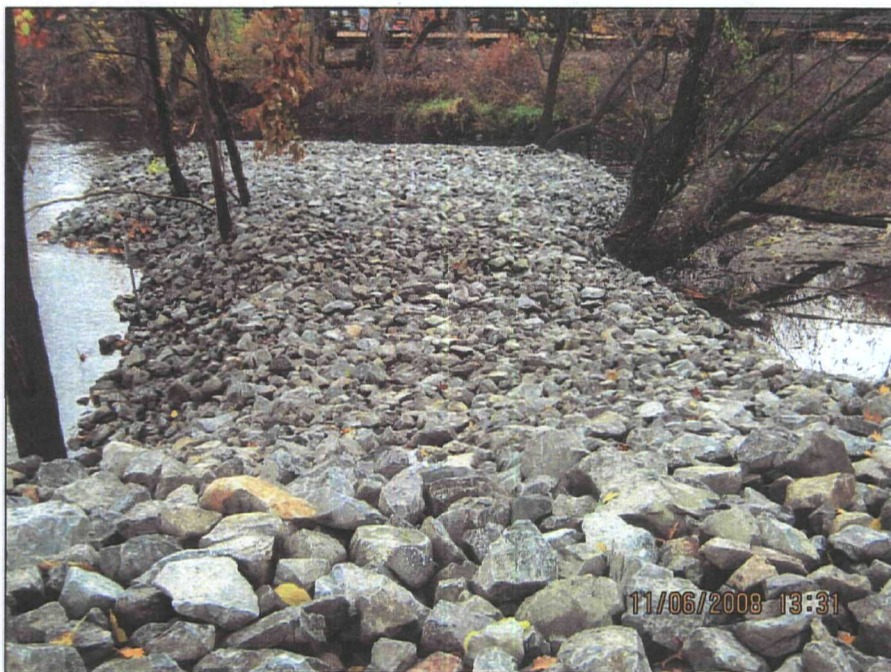
**Cornell Dubilier Electronics Site, Removal Action – Oct 14 – Nov 18, 2008**



Picture 67: Peninsula East of the twin culvert during installation of geotextile and rip-rap (November 5, 2008).



Picture 68: Peninsula East of the twin culvert. Geotextile and rip-rap have been installed (November 6, 2008).



Picture 69: Peninsula East of the twin culvert. Geotextile and rip-rap have been installed (November 6, 2008).



Picture 70: Top of the twin culvert; geotextile and rip-rap have been installed (November 6, 2008).



Picture 71: Chipping of cleared brush and tree waste (November 6, 2008).



Picture 72: Chipped wood placed on access areas (November 6, 2008).



Picture 73: Fence posts installation on the West bank of the Bound Brook (November 10, 2008).



Picture 74: Detail of concrete installation at the base of a fence post (November 10, 2008).



Picture 75: Stockpiled chipped tree waste (November 12, 2008).

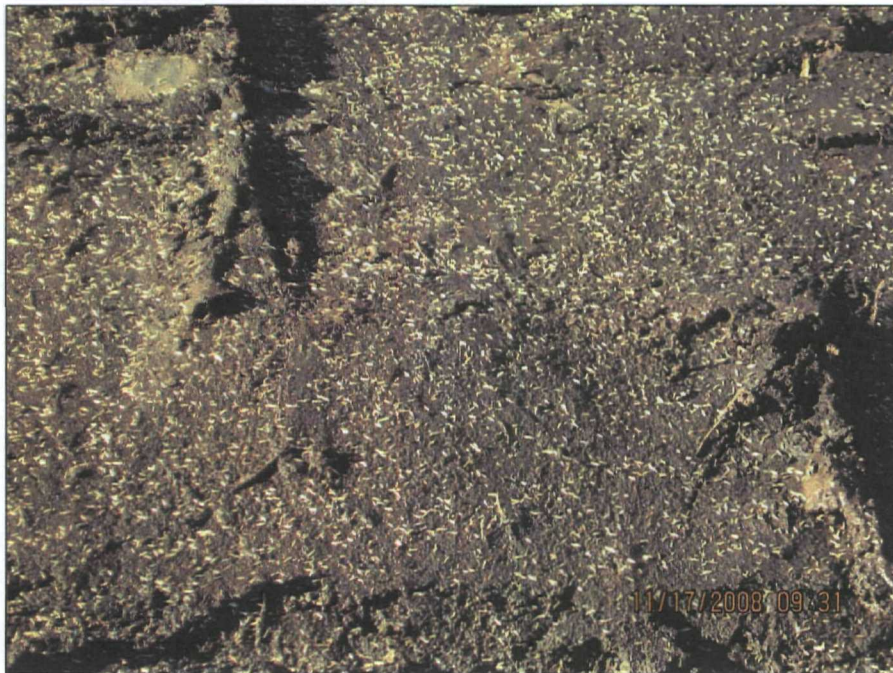


Picture 76: Installation of fence top rails (November 12, 2008).

**Cornell Dubilier Electronics Site, Removal Action – Oct 14 – Nov 18, 2008**



Picture 77: Completed fence and silt fence installed (November 17, 2008).



Picture 78: Grass seeding in cleared access areas (November 17, 2008).



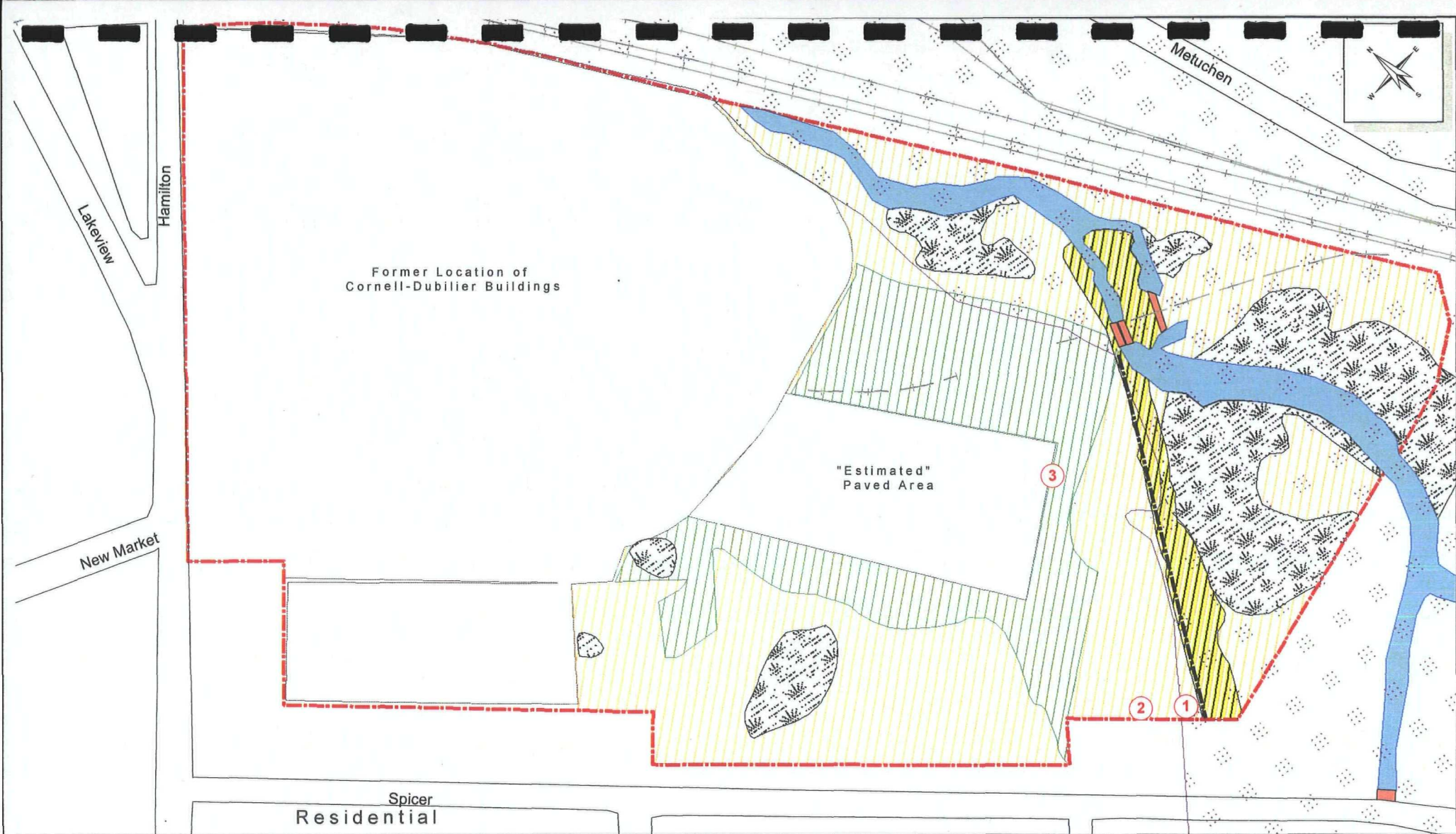
Picture 79: Chipped tree waste spread over cleared access areas  
(November 17, 2008).



Picture 80: Straw matting installed in cleared access areas  
(November 17, 2008).

**ATTACHMENT 3**

**PARTICULATE MONITORING DATA**



Date: October 14, 2008 Day: Tuesday

DataRAM No.	Start Time	Stop Time	Average Concentration	Location Description
1. D693	14:03	17:28	19.3	Southwest corner at Spicer Avenue perimeter
2. D685	14:15	16:32	Failed – battery fault	Southwest corner at Spicer Avenue perimeter.
3. D697	14:08	17:29	17.0	Background monitor – edge of paved area.

#### Legend

- 100 Year Floodplain
- Bound Brook
- Facility Property Boundary Limits
- Paved Area
- Geotextile Area
- Wetland Boundary Limits
- Broad Leaved Deciduous Forest
- Successional Field
- Rail Road
- Culvert
- Fence

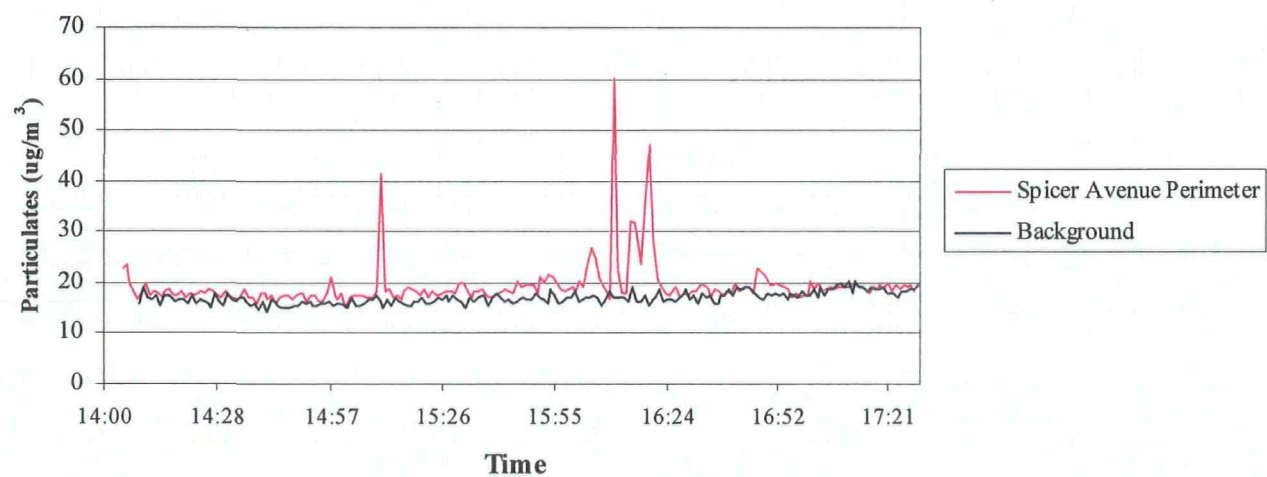
**WESTON** Weston Solutions, Inc.  
Northeast Division

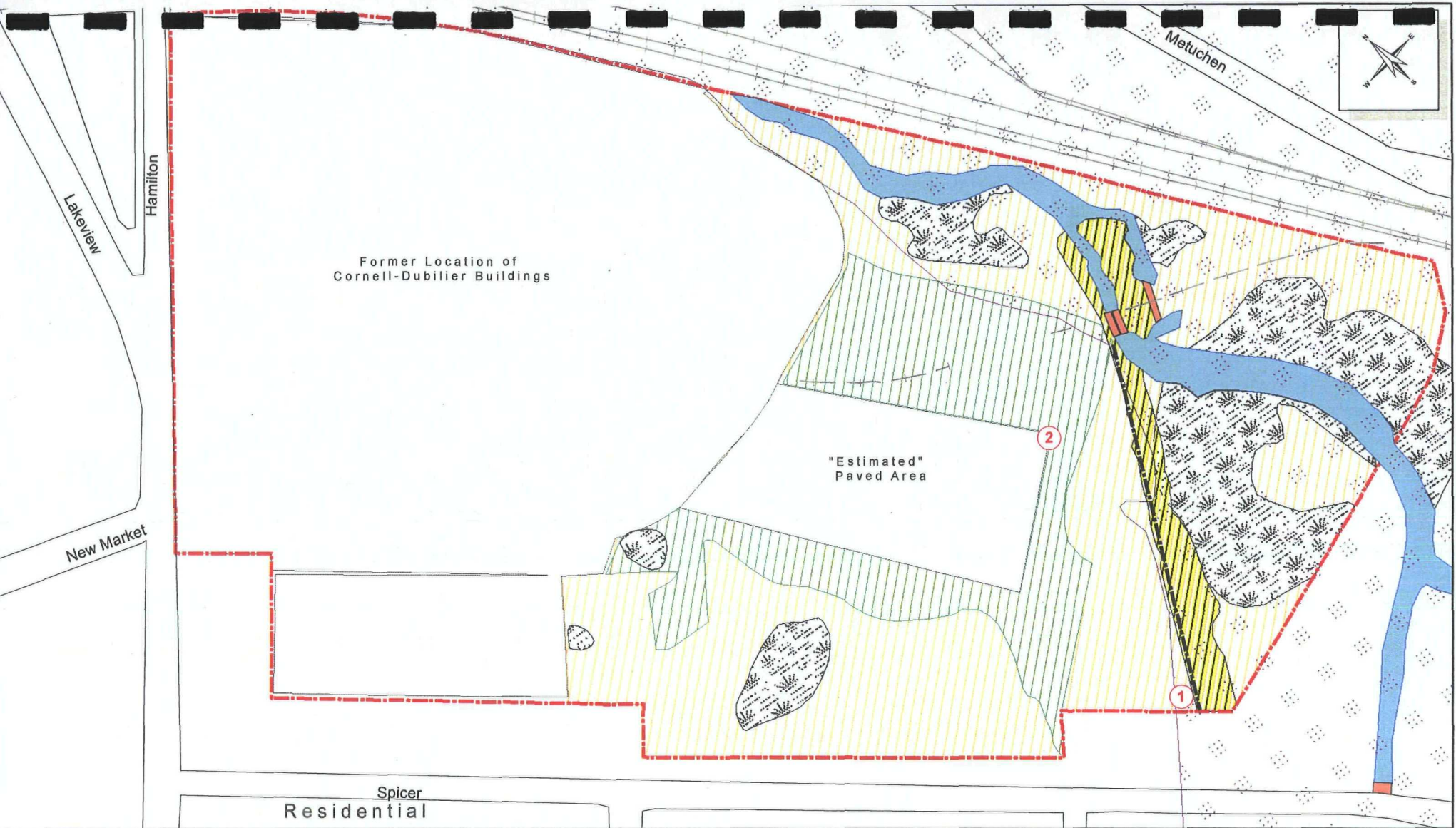
In Association With  
Avatar Environmental, LLC,  
Innovative Technical Solutions, Inc.  
and Scientific and Environmental Associates, Inc.

#### Cornell- Dubilier Electronics Superfund Site Particulate Monitoring Worksheet



### Cornell-Dubilier Electronics Particulate Monitoring October 14, 2008





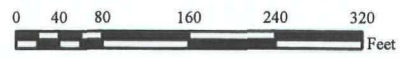
Date: October 15, 2008 Day: Wednesday

DataRAM No.	Start Time	Stop Time	Average Concentration	Location Description
1. D693	08:25	17:33	7.0	Southwest corner at Spicer Avenue perimeter
2. D697	08:38	17:32	5.0	Background monitor – edge of paved area.
3. NA	-	-	-	-

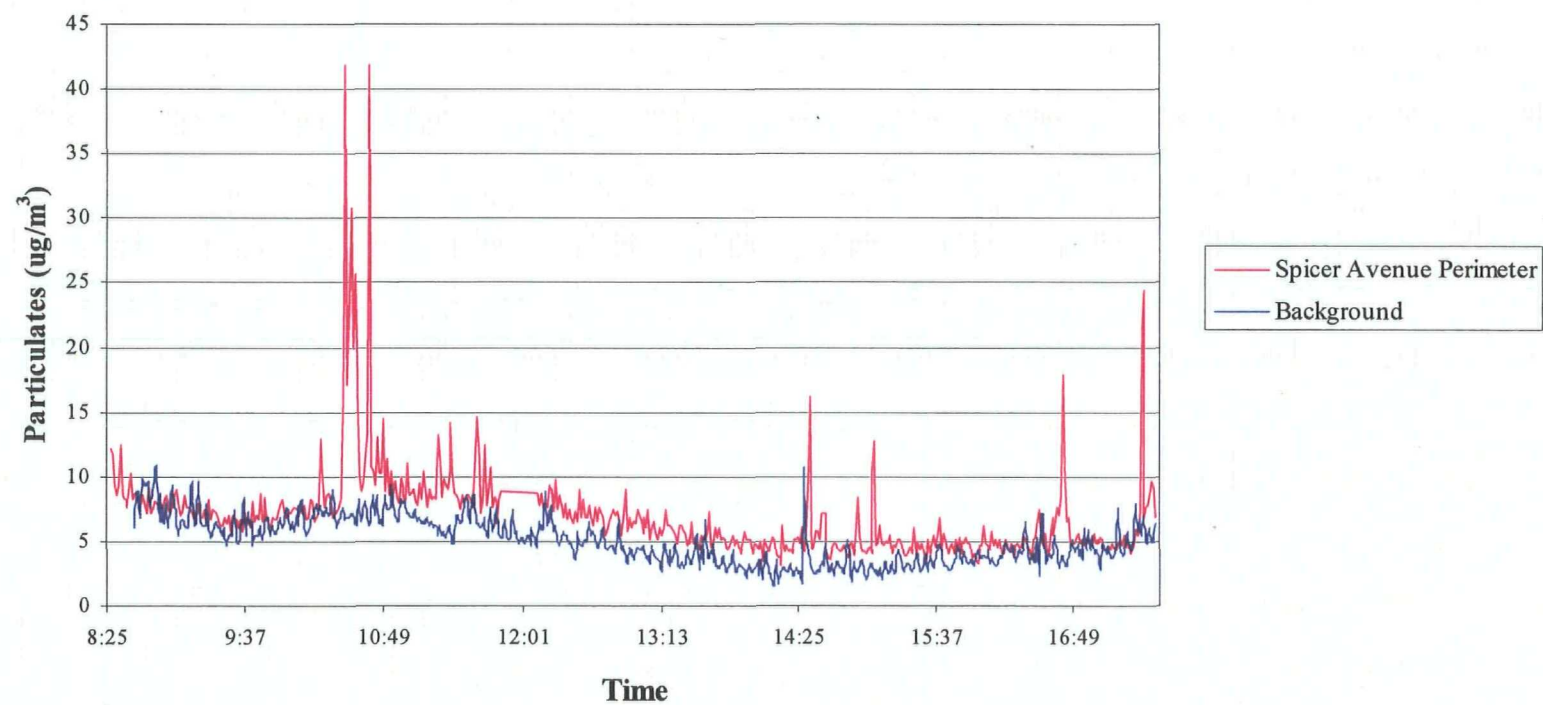
- Legend**
- 100 Year Floodplain
  - Bound Brook
  - Facility Property Boundary Limits
  - Paved Area
  - Geotextile Area
  - Wetland Boundary Limits
  - Broad Leaved Deciduous Forest
  - Successional Field
  - Rail Road
  - Culvert
  - Fence

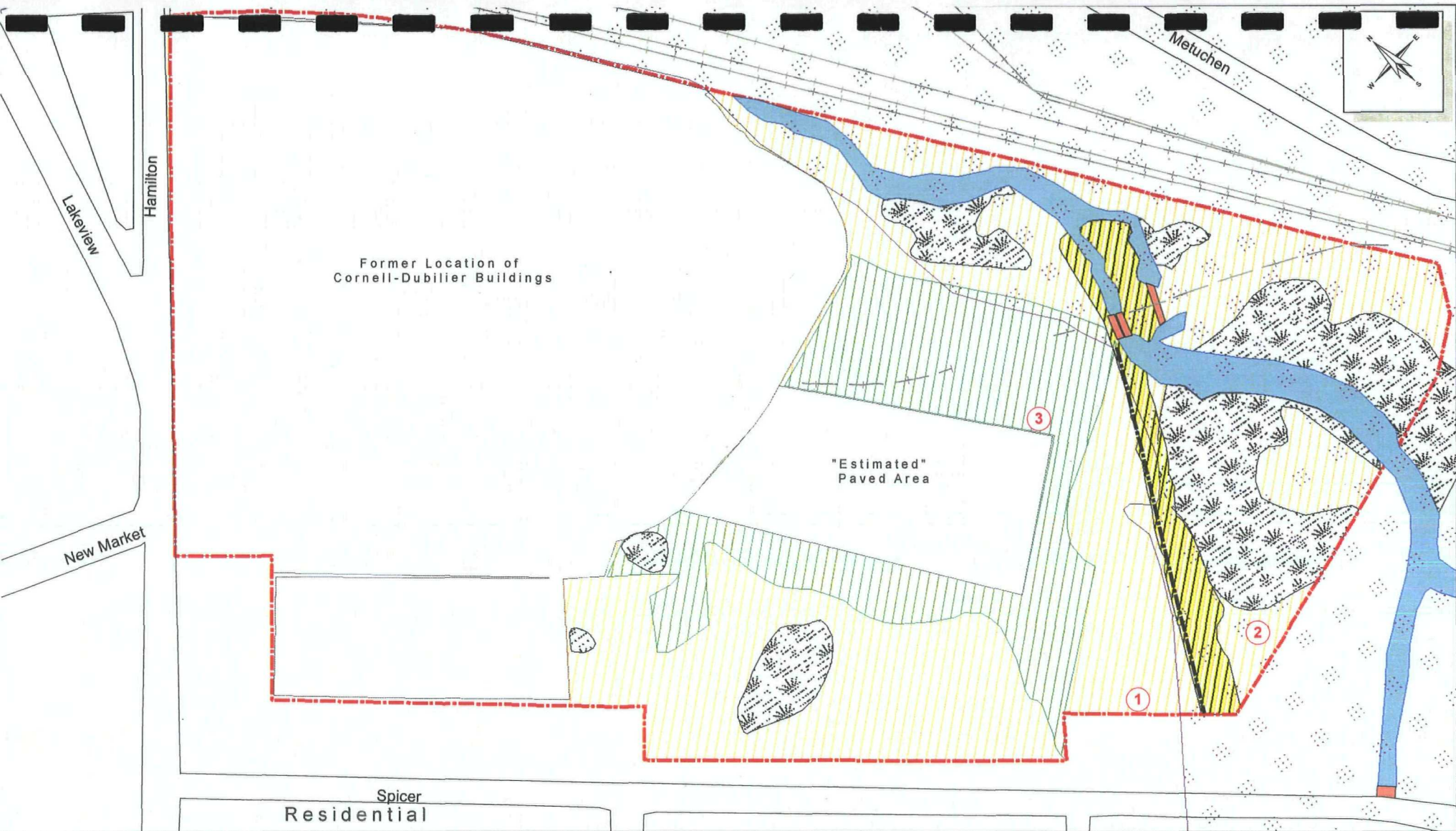
**WESTON** Weston Solutions, Inc.  
Northeast Division  
In Association With  
Avatar Environmental, LLC,  
Innovative Technical Solutions, Inc.  
and Scientific and Environmental Associates, Inc.

**Cornell- Dubilier Electronics Superfund Site  
Particulate Monitoring Worksheet**



**Cornell-Dubilier Electronics Particulate Monitoring October 15, 2008**





Date: October 16, 2008 Day: Thursday

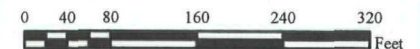
DataRAM No.	Start Time	Stop Time	Average Concentration	Location Description
1. D693	8:27	15:59	68.5	Southwest corner at Spicer Avenue perimeter.
2. D697	8:32	15:59	66.5	Wetlands adjacent to work area.
3. D346	8:03	16:12	61.0	Background monitor – edge of paved area.

#### Legend

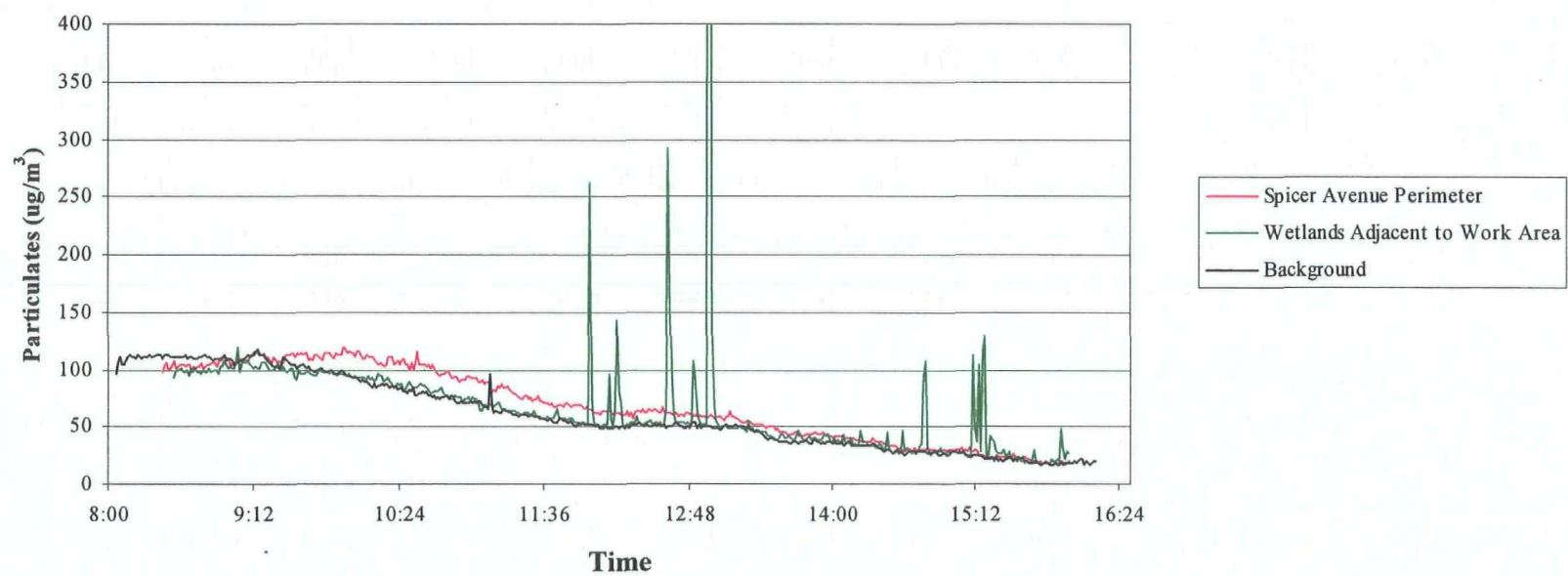
- 100 Year Floodplain
- Bound Brook
- Facility Property Boundary Limits
- Paved Area
- Geotextile Area
- Wetland Boundary Limits
- Broad Leaved Deciduous Forest
- Successional Field
- Rail Road
- Culvert
- Fence

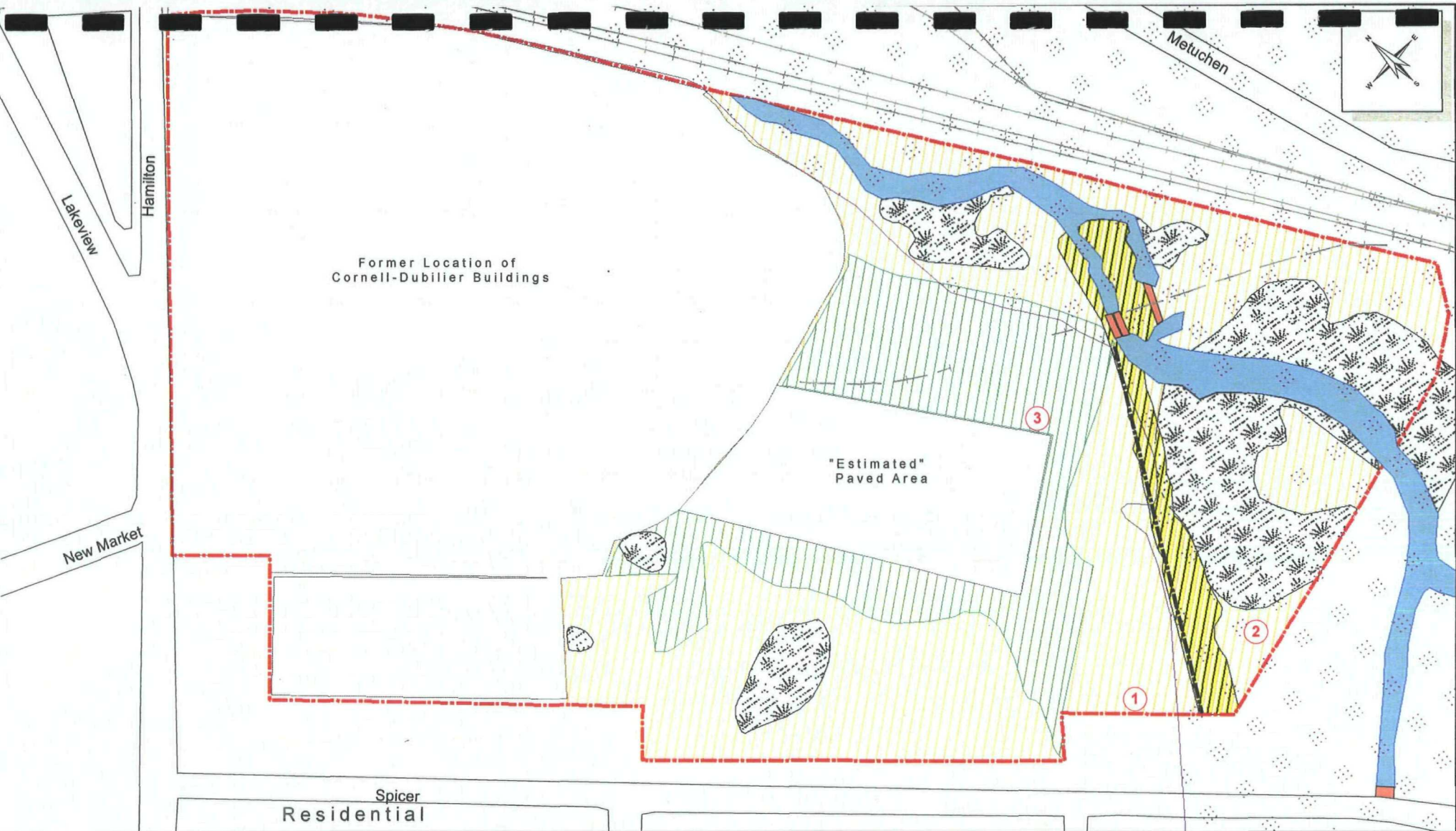
**WESTON** **Weston Solutions, Inc.**  
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 Innovative Technical Solutions, Inc.  
 and Scientific and Environmental Associates, Inc.

#### Cornell- Dubilier Electronics Superfund Site Particulate Monitoring Worksheet



### Cornell-Dubilier Electronics Particulate Monitoring October 16, 2008





Date: October 17, 2008 Day: Friday

DataRAM No.	Start Time	Stop Time	Average Concentration	Location Description
1. D693	8:15	16:29	9.1	Southwest corner at Spicer Avenue perimeter.
2. D697	8:07	16:32	17.2	Wetlands adjacent to work area.
3. D346	7:58	16:39	8.4	Background monitor - edge of paved area.

#### Legend

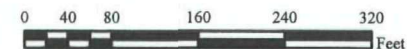
- 100 Year Floodplain
- Bound Brook
- Facility Property Boundary Limits
- Paved Area
- Geotextile Area
- Wetland Boundary Limits
- Broad Leaved Deciduous Forest
- Successional Field
- Rail Road
- Culvert
- Fence



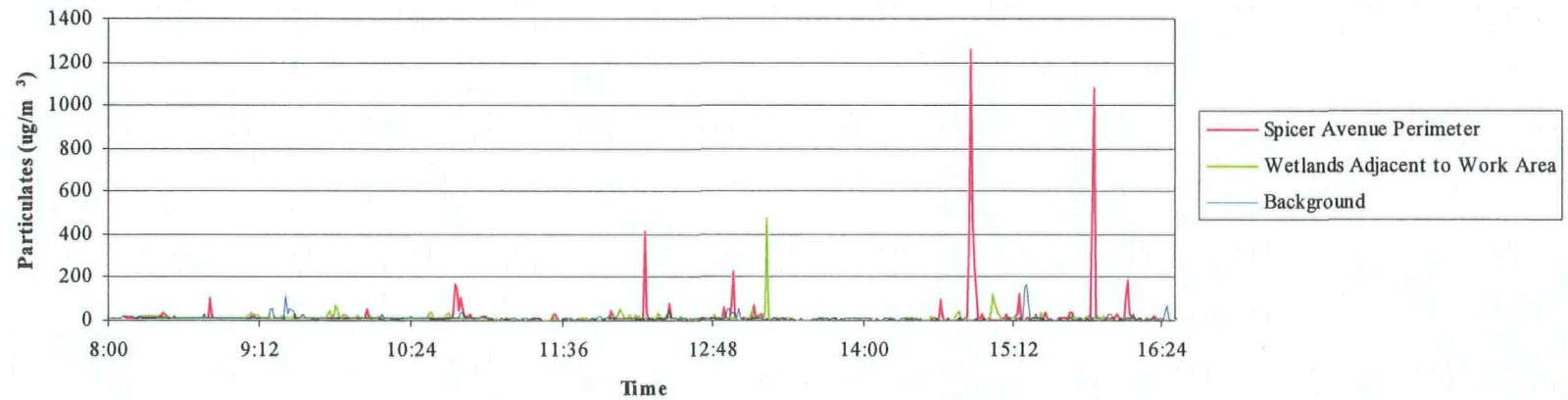
**Weston Solutions, Inc.**  
Northeast Division

In Association With  
Avatar Environmental, LLC,  
Innovative Technical Solutions, Inc.  
and Scientific and Environmental Associates, Inc.

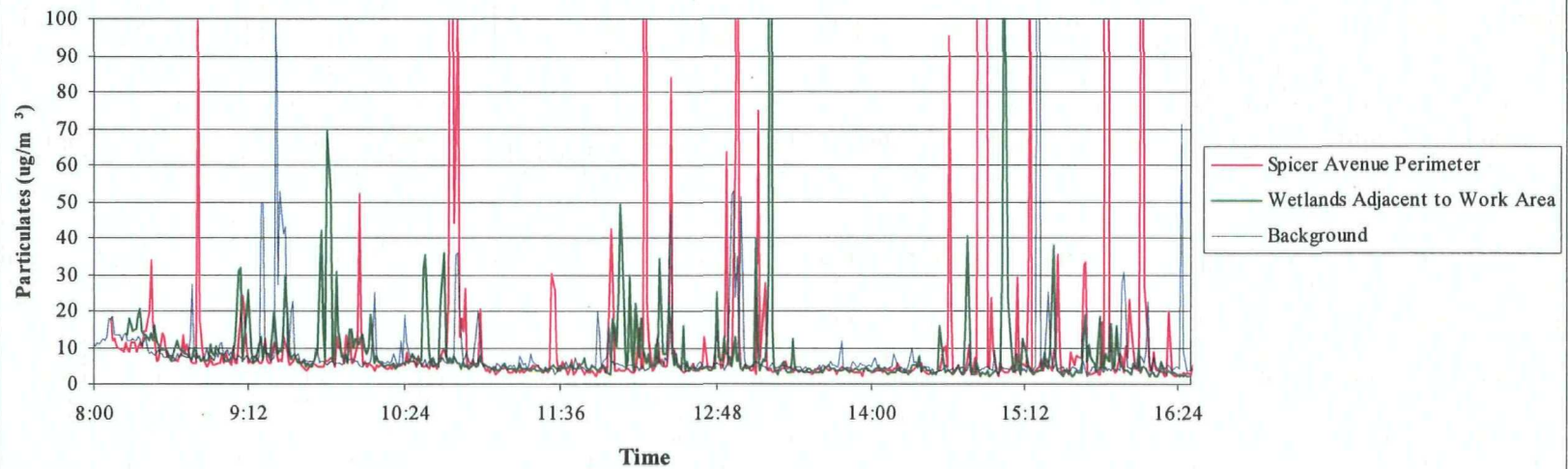
#### Cornell- Dubilier Electronics Superfund Site Particulate Monitoring Worksheet

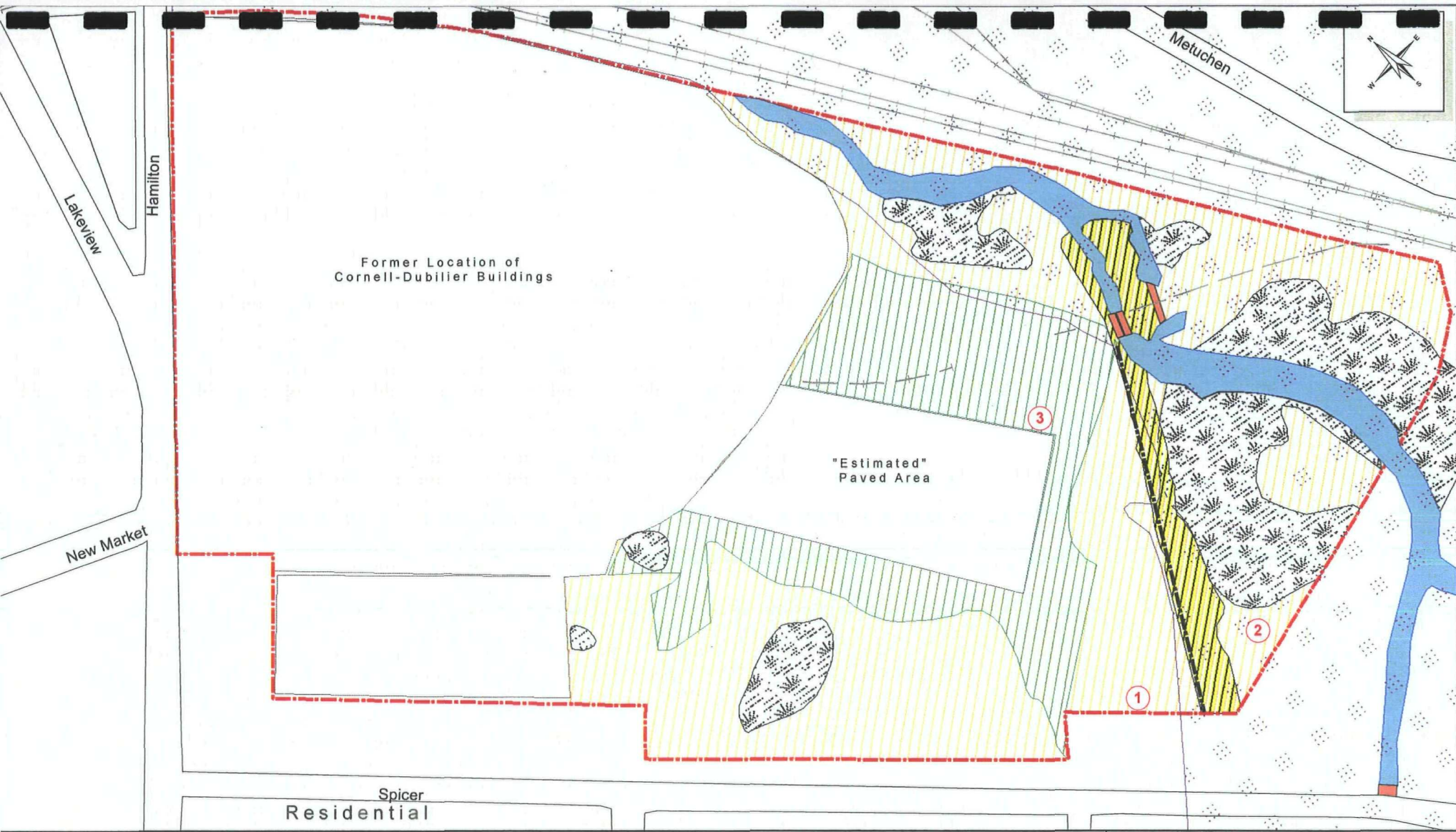


**Cornell-Dubilier Electronics Particulate Monitoring October 17, 2008**



**Cornell-Dubilier Electronics Particulate Monitoring October 17, 2008**





Date: October 20, 2008 Day: Monday

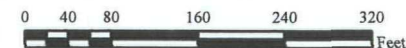
DataRAM No.	Start Time	Stop Time	Average Concentration	Location Description
1. D693	7:59	14:29	11.9	Southwest corner at Spicer Avenue perimeter.
2. D697	8:06	14:32	15.0	Wetlands adjacent to work area.
3. D346	7:49	14:40	16.7	Background monitor—edge of paved area.

#### Legend

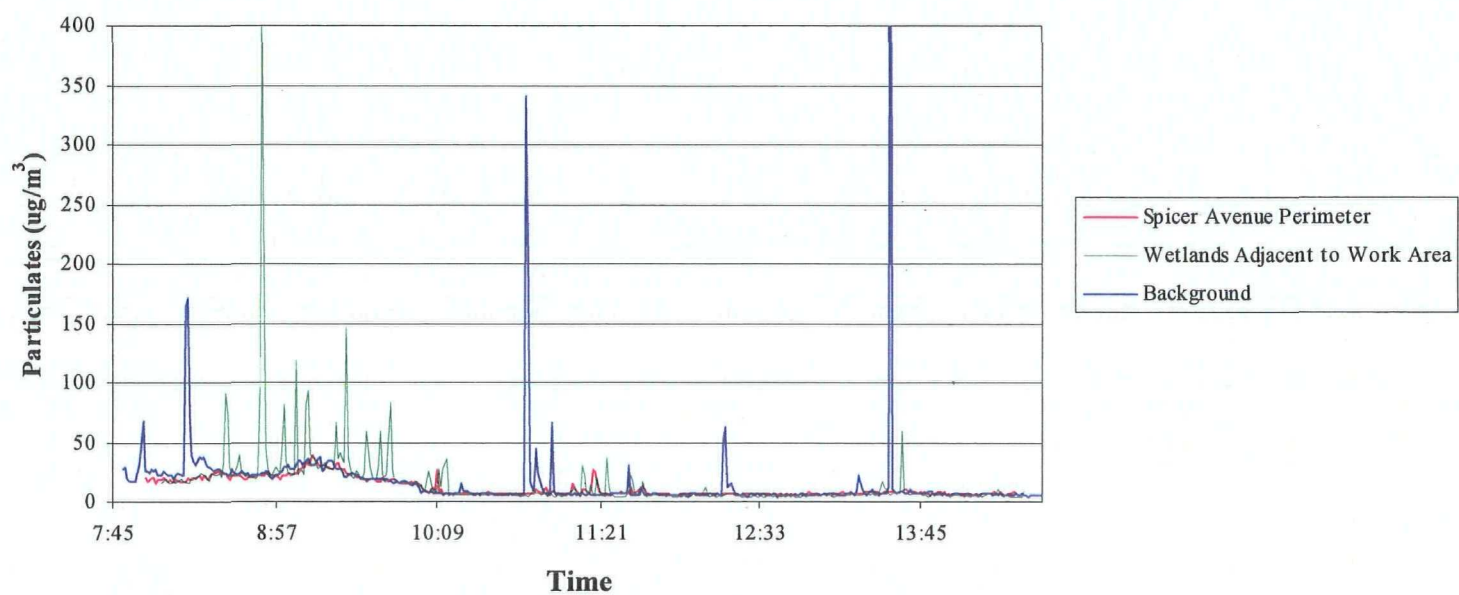
- 100 Year Floodplain
- Bound Brook
- Facility Property Boundary Limits
- Paved Area
- Geotextile Area
- Wetland Boundary Limits
- Broad Leaved Deciduous Forest
- Successional Field
- Rail Road
- Culvert
- Fence

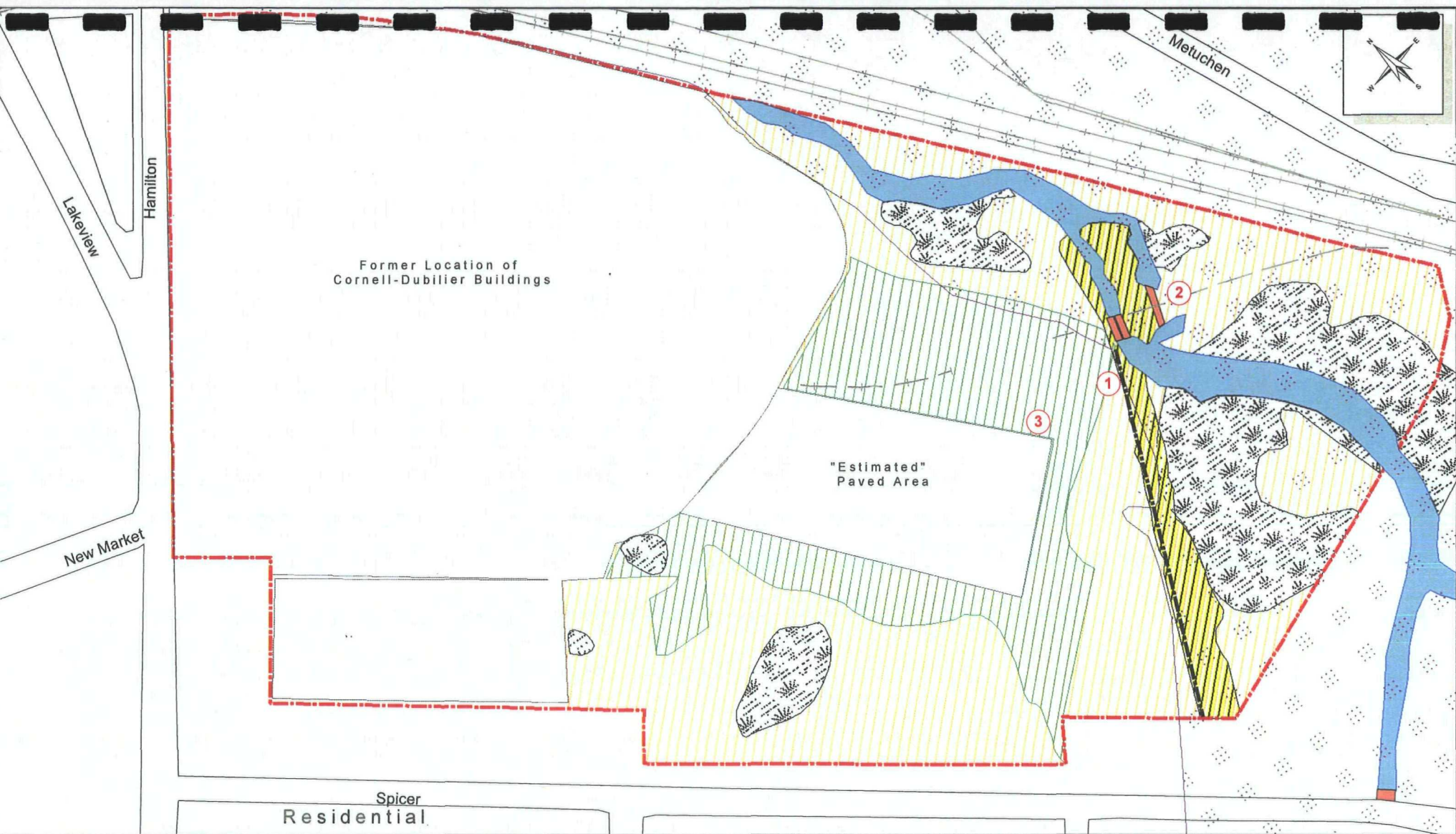
**WESTON SOLUTIONS** Weston Solutions, Inc.  
 Northeast Division  
 In Association With  
 Avatar Environmental, LLC,  
 Innovative Technical Solutions, Inc.  
 and Scientific and Environmental Associates, Inc.

#### Cornell- Dubilier Electronics Superfund Site Particulate Monitoring Worksheet



### Cornell-Dubilier Electronics Particulate Monitoring October 20, 2008





Date: October 22, 2008 Day: Wednesday

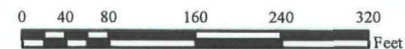
DataRAM No.	Start Time	Stop Time	Average Concentration	Location Description
1. D693	11:02	14:21	4.8	South of rip-rap staging area adjacent to fence-line
2. D697	10:41	14:17	2.3	Eastern side of culvert
3. D346	10:22	14:26	4.0	Background monitor—edge of paved area.

#### Legend

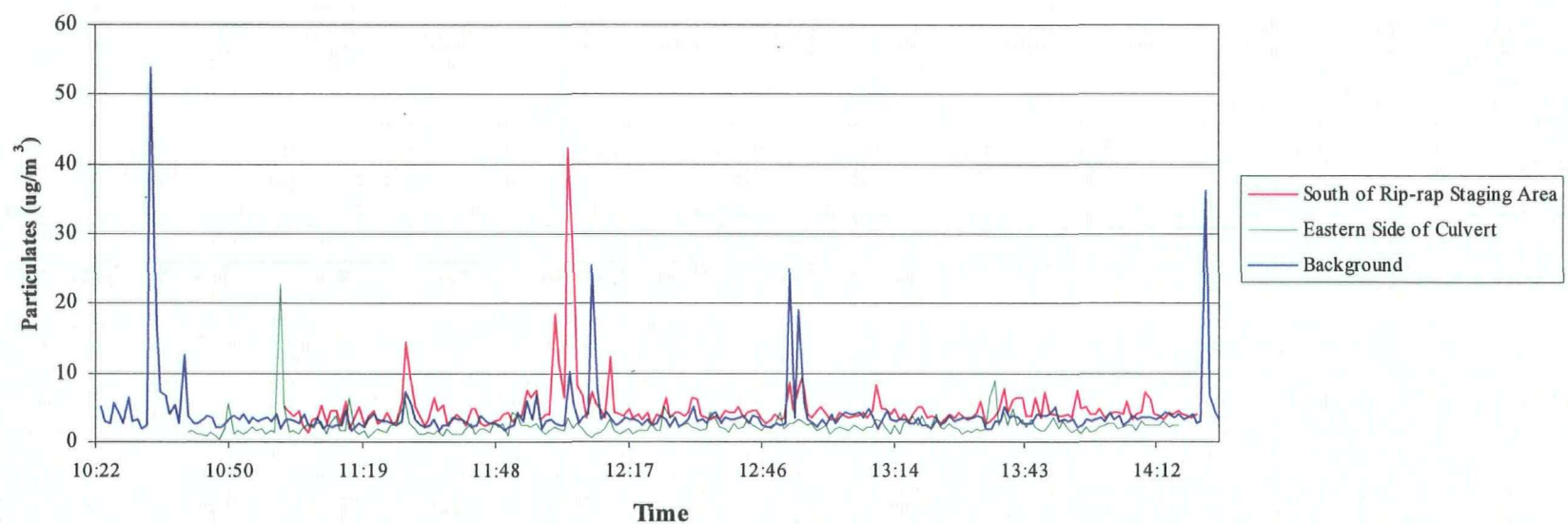
- 100 Year Floodplain
- Bound Brook
- Facility Property Boundary Limits
- Paved Area
- Geotextile Area
- Wetland Boundary Limits
- Broad Leaved Deciduous Forest
- Successional Field
- Rail Road
- Culvert
- Fence

**WESTON** **Weston Solutions, Inc.**  
 Northeast Division  
 In Association With  
 Avatar Environmental, LLC,  
 Innovative Technical Solutions, Inc.  
 and Scientific and Environmental Associates, Inc.

#### Cornell-Dubilier Electronics Superfund Site Particulate Monitoring Worksheet



### Cornell-Dubilier Electronics Particulate Monitoring October 22, 2008



**ATTACHMENT 4**

**PANORAMIC VIEW OF  
COMPLETED CONSTRUCCION**

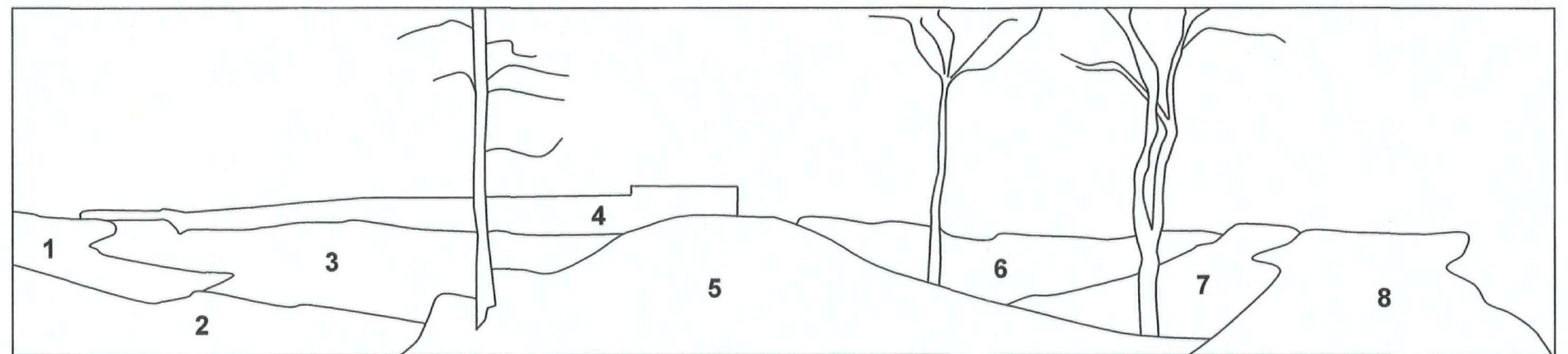
# Cornell-Dubilier Electronics Site – Interim Removal Action

## Panoramic View of Completed Construction



### Key to Site areas:

1. Wetlands area
2. Bound Brook upstream of the Twin Culvert
3. Rip-rap installed on the Western Bank
4. New fence installed at completion of construction
5. Rip-rap installed on top of the Twin Culvert
6. Rip-rap installed on Western Bank, downstream of the Twin Culvert
7. Bound Brook downstream of the Twin Culvert
8. Rip-rap installed on the Peninsula



**ATTACHMENT 5**  
**EPA POLLUTION REPORTS**

**U.S. Environmental Protection Agency  
Pollution Report**

**Subject:** Pollution Report (Initial) #1  
Cornell-Dubilier Site  
Site ID #: GZ  
Location of Site: 333 Hamilton Boulevard  
Middlesex County, South Plainfield, New Jersey

Latitude: 40.5775  
Longitude: -74.4136

**To:**

D. Harkay ERRD-RAB	D. Karlen, 2ORC-NYCSFB
J. Rotola, ERRD-RAB	D. Mellott, 2ORC-NYCSFB
B. Grealish, ERRD-RAB	T. Grier, 5202G
P. Mennino, EPA-NYRB	R. Byrnes, 2OIG
S. Flanagan, 2ORC-NYCSFB	J. Mater, NJDEP
G. Zachos, ACSM/O	C. Kelley, RST
B. Doctors, ERRD-RAB	

**From:** James Kearns, On-Scene Coordinator

**Date:** October 21, 2008

**Reporting Period:** 07:00 Hrs 10/13/08 to 17:30 Hrs 10/20/08

## **1.0 Introduction**

### **1.1 Background**

The Cornell-Dubilier Electronics, Inc. ("CDE") Site is located at 333 Hamilton Boulevard, South Plainfield, Middlesex County, New Jersey. The former CDE facility consists of approximately 26 acres that formerly contained 18 buildings. The fenced 26-acre facility is bounded on the northeast by the Bound Brook and the former Lehigh Valley Railroad, Perth Amboy Branch (presently Conrail); on the southeast by the Bound Brook and a property used by the South Plainfield Department of Public Works; on the southwest, across Spicer Avenue, by single-family residential properties; on the northwest, across Hamilton Boulevard, by mixed residential and commercial properties; and to the south by a wetlands area.

Prior to 1936, Spicer Manufacturing Corp., a predecessor to Dana Corporation, owned and operated the facility. Spicer Manufacturing Corp. ceased operations in South Plainfield in 1929 and, beginning in 1936, leased the property to CDE. CDE operated at the facility from 1936 to 1962, manufacturing electronic components including, in particular, capacitors. Polychlorinated biphenyls ("PCBs") and chlorinated organic solvents were used in the manufacturing process, and the company apparently disposed of PCB-contaminated materials and other hazardous substances directly on the facility soils. CDE's activities evidently led to widespread chemical contamination at the facility, as well as migration of contaminants to areas nearby the facility. PCBs have been detected in the

groundwater, soils and in building interiors at the industrial park, at adjacent residential, commercial, and municipal properties, and in the surface water and sediments of the Bound Brook. High levels of volatile organic compounds (VOCs) have been found in the facility soils and in groundwater. Since CDE=s departure from the facility in 1962, it has been operated as a rental property, with over 100 commercial and industrial companies operating at the facility as tenants. Some of these tenants may have contributed to some Site contamination, but the PCB and VOC contamination appears to be primarily attributable to CDE=s operation.

Capacitors, many containing PCBs, were dumped in large numbers at the site, and capacitor debris has been found in the Bound Brook since the site was first identified. Recent erosion of a portion of the stream bank near the industrial park may have led to a spike in the amount of capacitor debris in the Brook.

Periodic inspections of the Bound Brook adjacent to the former CDE facility have identified an occasional capacitor. These capacitors are believed to have been displaced due to erosion. In December 2007, EPA collected additional sediment samples in the Bound Brook adjacent to the former CDE facility. Results indicate that PCB concentrations have increased in some areas of the Bound Brook. EPA's observations of occasional capacitors on the banks of the Brook and review of recent sediment analytical data warrants further action by EPA.

The removal action planned to begin on October 14, 2008 is an interim action that will armor the banks of the Bound Brook in the area of the three culverts and along the wetlands that border the historical CDE disposal area. The objective is to eliminate direct contact with PCB-contaminated debris and prevent its migration from the banks along the perimeter of the former CDE facility property. The following actions are proposed to stabilize the banks to prevent the release of PCB-contaminated debris due to erosion:

- Vegetation will be cleared from the banks of the Bound Brook in the area of the three culverts and on the southern bank of the facility property along the edge of the wetlands area. Approximately 15,000 to 20,000 ft<sup>2</sup> of area will be cleared of vegetation.
- Geotextile fabric will be installed over the soil in the cleared area to prevent erosion. The barrier will be installed on the banks of the Bound Brook in Reach 1, from near the railway siding and three culverts to approximately 140 feet downstream of the culverts in the tongue area and north bank and for approximately 500 feet upstream of the culverts along the southern bank of the former CDE facility property that borders the wetlands area.
- Rip-rap will be installed over the geotextile fabric to armor the banks of the Bound Brook and to secure the geotextile fabric ("revetment installation").
- A dust monitoring/control program will be initiated during all site activities. All cleared vegetation will be chipped on-site and spread on the temporary roadways.

#### Background Information

Site No.:	GZ
Cerclis No:	NJD981557879
Response Authority:	CERCLA
NPL Status:	Site was listed on the NPL July 1998
Record of Decision:	ROD for Operational Unit #1 ("OU-1")- issued on September 30, 2003. OU-1 addresses residential, commercial, and properties in the vicinity of the site. ROD for OU-2- issued municipal in September 2004. OU-2 addresses soils with PCB concentrations above 500 ppm and contaminated soils that exceed New Jersey's Impact to Groundwater Soil Cleanup Criteria for contaminants other than PCBs

Start Date: October 14, 2008  
Demobilization Date:  
Completion Date: N/A  
Operable Unit: OU-4  
Type of Removal Action: RV- Removal  
Lead: EPA Lead

#### **1.1.1 Incident Category**

*CERCLA Incident Category:* Other- Interim Action to stabilize the Banks of the Brook along the east boundary of the site and along the edge of the wetlands located in the southern portion of the site.

#### **1.1.2 Site Description**

##### **1.1.2.1 Site Location**

The site coordinates are 40.5775 Latitude and -74.4136 Longitude. The former CDE facility is located at 333 Hamilton Boulevard in South Plainfield, Middlesex County, New Jersey. It occupies approximately 26 acres in an area of mixed industrial, commercial and residential uses, and is bordered by commercial businesses and residences to the south, west, and northwest. Wetlands and an unnamed tributary to the Bound Brook border the former CDE facility to the southeast and east. Conrail railroad tracks pass alongside the eastern edge of the Site and crisscross the unnamed tributary just north of the former CDE facility. Other industries and commercial businesses are present to the northeast and east of the former CDE facility on the opposite side of the Conrail tracks. An estimated 540 persons reside within 0.25 miles of the former CDE facility, with the nearest residential homes being located on Spicer Avenue and on the opposite side of Hamilton Boulevard, less than 200 feet from the former CDE facility. The total population estimated to live within one mile of the Site is 8,700 persons. A site map is included as Appendix 1.

The unnamed tributary flows into the Bound Brook approximately 0.75 miles downstream of the former CDE facility. The Bound Brook flows for 1.5 miles before emptying into New Market Pond. Surface water flow from New Market Pond travels approximately 8.5 miles before discharging into the Raritan River. The dam on the western edge of New Market Pond is reportedly impassible to most fish. Spring Lake is located upstream from the Site and is associated with Cedar Brook. Both of these water bodies support secondary contact recreation including boating and fishing. All of the above-mentioned water bodies are designated by the State of New Jersey for the maintenance, migration, and propagation of the natural and established biota. These water bodies are utilized as freshwater fisheries. A fish consumption advisory has been posted for the area between the former CDE facility and New Market Pond. Wetlands that border the former CDE facility to the southeast diminish significantly as the Bound Brook heads downstream towards the northwest. The width of the stream in the vicinity of the former CDE facility varies from ten to 20 feet, with a varying depth during normal conditions, of one to four feet. Ground water is a significant source of drinking water within a four-mile radius of the Site. The majority of people within this radius are served by drinking water from either the Middlesex Water Company or the Elizabethtown Water Company, both of which utilize supply wells within four miles of the Site.

##### **1.1.2.2 Description of Threat**

PCBs are the most prevalent contaminants found at the Site. PCBs were initially released and disposed of as a result of manufacturing activities at the former CDE facility, and have migrated and been spread further since CDE ceased operations. Surface and subsurface soil sample analytical results indicated the presence of PCB compounds in almost

all of the samples collected. Four individual Aroclors (-1242, -1248, -1254, and -1260) were detected at the former CDE facility.

PCBs are a group of 209 different chemicals which share a common structure but vary in the number of attached chlorine atoms. The International Agency for Research on Cancer and EPA classify PCBs as a probable human carcinogen. The National Toxicology Program has concluded that PCBs are reasonably likely to cause cancer in humans. The National Institute for Occupational Safety and Health has determined that PCBs are a potential occupational carcinogen. Studies of PCBs in humans have found increased rates of melanomas, liver cancer, gall bladder cancer, biliary tract cancer, gastrointestinal tract cancer, and brain cancer, and have found that PCBs may be linked to breast cancer. PCBs are known to cause a variety of types of cancer in rats, mice, and other study animals.

Once PCBs enter a person's (or animal's) body, they tend to be absorbed into fat tissue and remain there. Unlike water-soluble chemicals, they are not excreted, so the body accumulates PCBs over years. This means that PCBs also accumulate via the food chain: a small fish may absorb PCBs in water or by eating plankton, and these PCBs are stored in its body fat. When a larger fish eats the small fish, it also eats and absorbs all the PCBs that have built up in the small fish. In this way, larger fish and animals can build up a highly concentrated store of PCBs. Some types of PCBs may degrade into nontoxic form while they are stored in the body, but this process can take many years.

People exposed directly to high levels of PCBs, either via the skin, by consumption, or in the air, have experienced irritation of the nose and lungs, skin irritations such as severe acne (chloracne) and rashes, and eye problems. Women exposed to PCBs before or during pregnancy can give birth to children with significant neurological and motor control problems, including lowered IQ and poor short-term memory.

PCBs with only a few chlorine atoms can mimic the body's natural hormones, especially estrogen. Women who consumed PCB-contaminated fish from Lake Ontario were found to have shortened menstrual cycles. PCBs are also thought to play a role in reduced sperm counts, altered sex organs, premature puberty, and changed sex ratios of children. More highly-chlorinated PCBs (with more chlorine atoms) act like dioxins in altering the metabolism of sex steroids in the body, changing the normal levels of estrogens and testosterone. PCBs tend to change in the body and in the environment from more highly-chlorinated to lower-chlorinated forms, increasing their estrogenic effects.

Because of the high concentrations of PCBs present in the soils in the southeastern portion of the former CDE facility, a limited number of surface and subsurface soil samples underwent PCB congener analysis. There are 209 congeners of PCBs. Individual congeners can have a toxicity similar to dioxin and, if present in sufficient concentrations, can pose a risk higher than the PCB congeners that lack the chemical properties of dioxin. This analysis revealed 3,3',4,4'-tetrachlorobiphenyl, a dioxin-like congener, at a maximum concentration of 2,200 parts per million ("ppm").

As reported in the September 2004 EPA ROD for OU2, test pit excavations unearthed capacitors that appeared corroded and/or partially burned. In addition, during excavation of test pits, white and blue crystalline powder, electrical components, and other materials were unearthed.

Due to the presence of charred debris in the test pits and the fact that burning PCBs can result in the generation of dioxins and dibenzofurans, a highly toxic group of contaminants, a limited set of soil samples were subjected to dioxin and furan analysis. Although analyzed in only a few surface and subsurface soil samples during the OU2 RI/FS, dioxins and furans were detected. These hazardous substances are acutely and chronically toxic, and carcinogenic. The potential health effects from some of these compounds are skin disorders such as chloracne; liver problems; impairment of the immune system, endocrine system, and reproductive functions; effects on the developing nervous system and other developmental events; and development of certain types of cancers.

The mechanisms by which these hazardous substances could be released include potential airborne release and potential migration of contamination in the surface water and groundwater. Numerous events could trigger releases.

The primary concerns include destabilization of the banks of the Bound Brook, bank erosion, migration of soils, migration of debris (such as PCB-contaminated wood blocks and PCB-contaminated paper film used in capacitors) as a result of flooding in the wetlands area, and seepage of PCB-contaminated perched groundwater from the overburden into the Bound Brook.

## **2.0 Current Activities**

### **2.1 Operations**

#### **2.1.1 Narrative**

Following receipt of authorization for the performance of this time-critical removal action at the Cornell-Dubilier Site for the installation of revetment, ERRS mobilized to site on October 13, 2008.

#### **2.1.2 Response Actions To Date**

On September 26, 2008 Earth Tech ("ET") was forwarded the Task Order for the Cornell-Dubilier Stream/Wetlands Stabilization Activities and began 3-bidding materials and equipment for the work.

On Friday October 10, 2008, a draft Health and Safety plan was completed by ERRS and reviewed by EPA.

Equipment and materials for the performance of site activities were received on site by ET on Monday October 13, 2008. Trailer, portable bathrooms, geotextile material and an excavator delivered to Site. ERRS personnel inspected and setup Site equipment. RM Galieto met with an electrician to discuss requirements.

Stabilization of the banks of the site bordering the wetlands began on Tuesday October 14, 2008. OSC, ERRS and RST 2 collected equipment from EPA Edison. A wheeled loader and a photocopier was delivered to Site. ERRS started grubbing in south-western corner of Site adjacent to Spicer Street perimeter fence. Approximately 5,000 ft<sup>2</sup> was cleared. RST 2 carried out particulate monitoring using DataRAM 4 particulate monitors - no particulate exceedances were recorded. Weather was fine, 70's°F, humidity 83%, wind 3mph, SW.

#### **2.1.4 Progress Metrics**

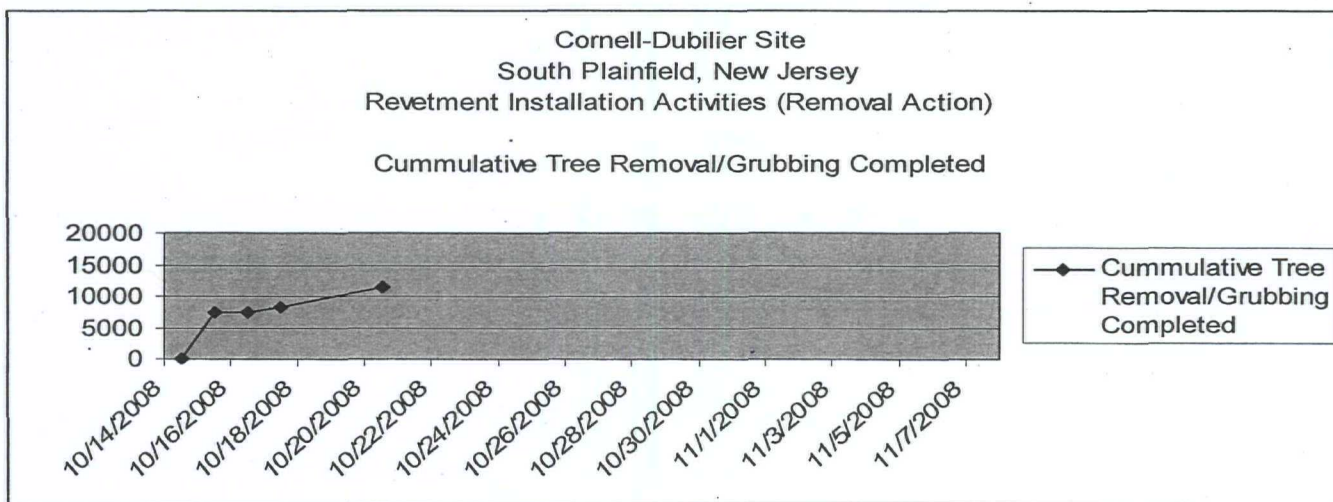
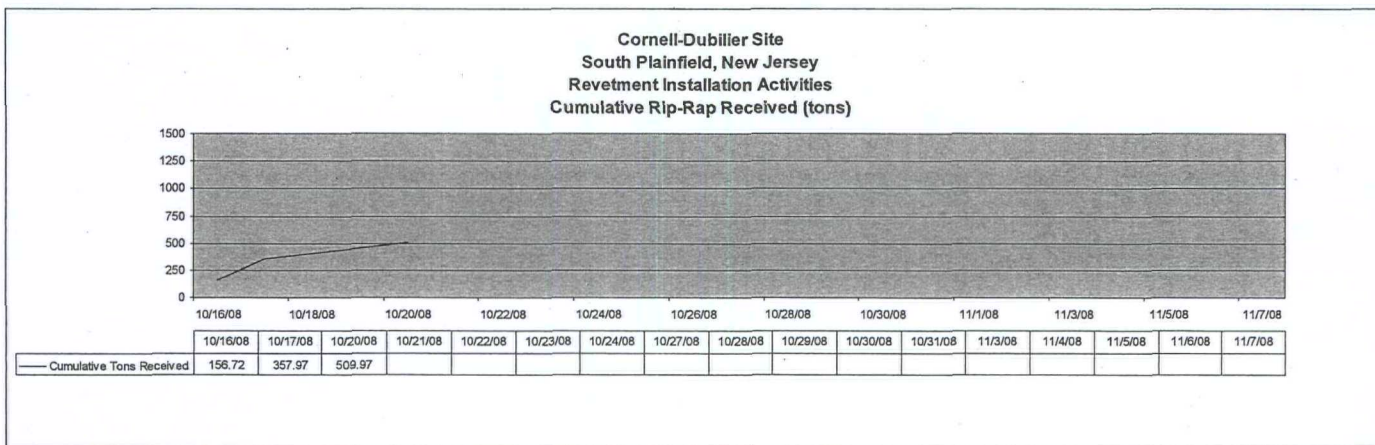
**10-15-08-** ERRS installed the stone staging area. ERRS continued grubbing in South-western corner of Site adjacent to Spicer Street perimeter fence. Approximately 7,200 ft<sup>2</sup> has been cleared. ERRS installed geotextile material in South-western corner of Site. Approximately 750 ft<sup>2</sup> of geotextile material was installed. Verizon connected telephone service to Site trailers. OSC obtained replacement DataRAM from EPA, Edison. RST 2 carried out particulate monitoring using DataRAM 4 particulate monitors - no particulate exceedances were recorded. RST 2 measured total area cleared by ERRS. RST 2 photographed Site activities and generated photo documentation log. RST 2 generated daily site entry/exit log. RST 2 generated particulate monitoring summary. No particulate exceedances were observed. Weather was fine, 70's°F, average humidity 77%, wind 1mph, (calm).

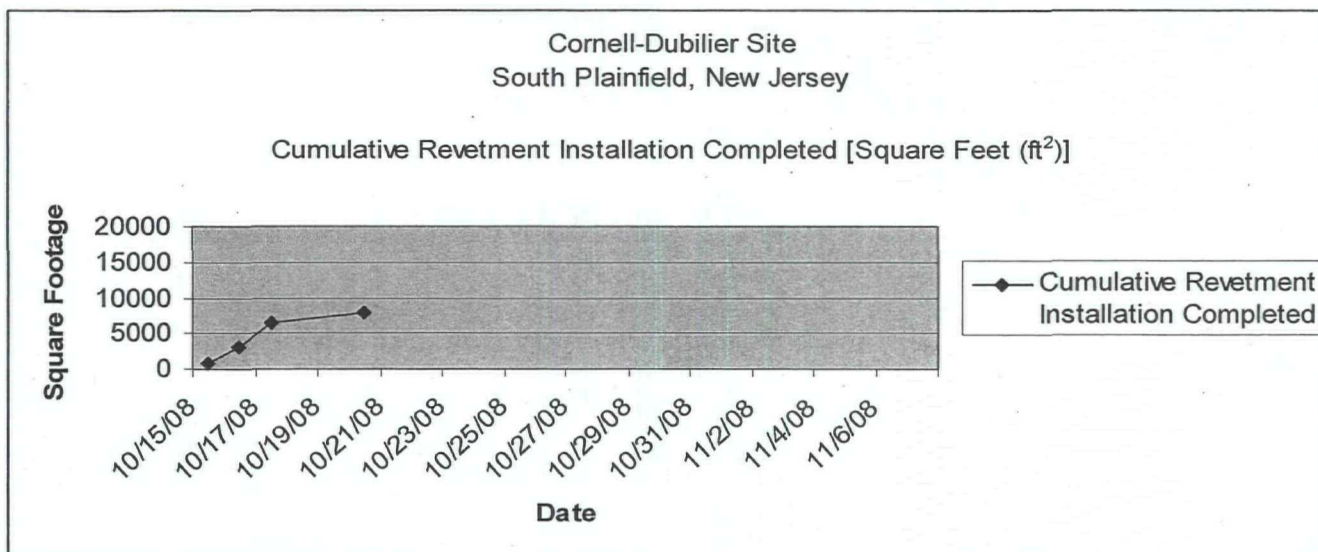
**10-16-08-** Six truck-loads of 6" D50 rip-rap were delivered to Site and staged. ERRS transferred staged stone to prepared area in South-west corner of Site. ERRS installed stone over geotextile in South-west corner of Site.

Approximately 3,000 ft<sup>2</sup> of geotextile and rip-rap has been installed. Electrician connected power to Site trailers. RST 2 carried out particulate monitoring using DataRAM 4 particulate monitors - no particulate exceedances were recorded. Particulate levels were elevated due to haze and high humidity. RST 2 photographed Site activities and generated photo documentation log. RST 2 generated daily site entry/exit log. RST 2 generated particulate monitoring summary. RST 2 generated particulate monitoring summary. No particulate exceedances were observed. Weather was cloudy, maximum temp. 79°F, average humidity 69%, wind 7mph, S-N.

**10-17-08-** Diesel fuel tank delivered to Site. Rock box delivered to Site. [8] truck-loads of 6" D50 rip-rap delivered. ERRS continued installing geotextile material and rip-rap in wetland area. At the end of the day a total of ~6,480 ft<sup>2</sup> of armoring (clearing, geotextile placement and rip-rap coverage) was complete. To date ~360 tons of 6" D-50 rip rap has been delivered to the site. RST 2 generated particulate monitoring summary. No particulate exceedances were observed.

**10/20/08-** ERRS continued grubbing along the stream bank area to the south of the double culvert. Approximately 150 linear feet of bank was cleared of trees/brush and geotextile was placed over 50 feet of bank and covered with rip-rap. Additional geotextile was ordered. Six loads of rip-rap were delivered to site. To date a total of approximately 512 tons of rip-rap has been delivered to site. RST generated particulate monitoring summary. No particulate exceedances were observed.





## 2.2 Planning

### 2.2.1 Anticipated activities for next reporting period

#### 2.2.1.1 Planned Response Activities

Since 2007 periodic inspections have been conducted along the Bound Brook near the former CDE facility. Capacitors, capacitor parts, and PCB-contaminated wood blocks discovered during these inspections have been collected and secured in drums at the Site for future disposal.

The removal action proposed in this Action Memorandum is an interim action that will armor the banks of the Bound Brook in the area of the three culverts and along the wetlands that border the historical CDE disposal area. The objective is to eliminate direct contact with PCB-contaminated debris and prevent its migration from the banks along the perimeter of the former CDE facility property. The following actions are proposed to stabilize the banks to prevent the release of PCB-contaminated debris due to erosion:

- Vegetation will be cleared from the banks of the Bound Brook in the area of the three culverts and on the southern bank of the facility property along the edge of the wetlands area. Approximately 15,000 to 20,000 ft<sup>2</sup> of area will be cleared of vegetation.
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- Rip-rap will be installed over the geotextile fabric to armor the banks of the Bound Brook and to secure the geotextile fabric.
- A dust monitoring/control program will be initiated during all site activities. All cleared vegetation will be chipped on-site and spread on the temporary roadways.

#### 2.2.1.2 Next Steps

- Receive 400 tons of 6-inch D-50 Rip Rap
- Receive an additional 10,000 ft<sup>2</sup> of geotextile
- Generate a plan for disposal of PPE
- Complete Administrative Record
- Clear 2,500 ft<sup>2</sup> of bank
- Install 2,500 ft<sup>2</sup> of revetment
- Remove debris from culverts
- Begin segregating brush from trees that will be run through chipper

#### 2.2.2 Issues

ERRS field crew is capable of keeping up with installation of materials/equipment as it is currently planned to arrive. Tracking of progress will be important to ensure on-time completion and under budget.

#### 2.3 Logistics

Crew has progressed quicker than anticipated. Additional Rip-rap deliveries have been added to the schedule and additional geotextile fabric has been ordered earlier than anticipated.

#### 2.4 Finance

##### 2.4.1 Narrative

##### 2.4.2 Metrics

	<u>Budgeted</u>	<u>Cost to Date</u>
ERRS Contractor	\$355,466	\$60,000
RST	\$42,500	\$6,200
Project Ceiling	\$562,000	
Percent of Project Funds Remaining		80%

"The above accounting expenditures are an estimate based on figures known to the OSC at the time this report was written. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery."

#### 4.0 Personnel On Site

<u>Name</u>	<u>Affiliation</u>
Jim Kearns	USEPA On-Scene Coordinator
Joe Galioto	ERRS-RM
Eric Williams	ERRS-Operator
Ernest Brown	ERRS- Technician

Morris Greene	ERRS- Technician
Matt Jaggard	ERRS- FCA
Matt Foster	Weston- RST 2

## **5.0 Definition of Terms**

ERRS- Emergency Response and Remediation Services  
PCBs- Polychlorinated biphenyls  
PPM- Parts per million  
ROD- Record of Decision

## **6.0 Sources of Additional Information**

### **6.1 Internet Location of additional information/reports**

For additional information, please refer to "Documents" on [www.epaossc.org/](http://www.epaossc.org/).

### **6.2 Reporting Schedule**

The next Polrep will be submitted on 10-29-08.

## **7.0 Situational Reference Materials**

Photo-documentation performed the week of morning of 10-13-08 to 10-17-08 is included below.



Picture 1: South-eastern corner of Site prior to grubbing (October 14, 2008)



Picture 2: South-eastern corner of Site during grubbing (October 14, 2008)



Picture 3: Slope bordering wetland at South-eastern corner of Site prior to grubbing (October 14, 2008)



Picture 4: Slope bordering wetland at South-eastern corner of Site following grubbing (October 15, 2008)



Picture 5: Poly sheeting placed over crushed stone base in Stone Staging Area (October 15, 2008)



Picture 6: Additional crushed stone placed over poly sheeting in Stone Staging Area (October 15, 2008)



Picture 7: Capacitor film uncovered near Southwest corner of Site (October 15, 2008)



Picture 8: View from west along southern boundary of Site prior to the Removal Action (October 15, 2008)



Picture 9: Geotextile material install on bank adjacent to wetland perimeter fence  
(October 15, 2008)



Picture 10: Rip-rap in staging area (October 16, 2008)



Picture 11: Rip-rap installed over geotextile material at edge of wetland area  
(October 16, 2008)